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A Financial Review and Cost - Benefit Analysis of Fuel Storage
Tank Upgrades at the Navy Exchange Gas Station,
Naval Postgraduate School, Monterey, California

by

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This thesis examines the costing allocations at the Navy Exchange Gas Station, Naval Postgraduate School, Monterey California. From this a complete cost picture has been provided from which to improve cost data for future upgrade and maintenance decisions involving the facilities. This is becoming more critical in light of both the funding reductions currently being experienced by the military services, and the growing complexity and expense of complying with increasingly stringent environmental regulations. Additionally, this study determines if three facilities upgrade options faced by the Navy Exchange are financially justified and which of them is the most desirable.

This study found that the Navy Exchange costing practices are sound, and with some minor adjustments, an even higher accuracy of record keeping could be attained. To meet environmental compliance concerns, Alternative II, replacing the underground storage tanks with new ones in 1998, is the best of the three options considered. Present value 1993 costs of this alternative is $214,451 and the estimated payback is 15.5 months.

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ABSTRACT

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This study found that the Navy Exchange costing practices are sound, and with some minor adjustments, an even higher accuracy of record keeping could be attained. To meet environmental compliance concerns, Alternative II, replacing the underground storage tanks with new ones in 1998, is the best of the three options considered. Present value 1993 costs of this alternative is $214,451 and the estimated payback is 15.5 months.

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I. INTRODUCTION

With shrinking defense dollars a reality in the 1990s, appropriated funds for facilities, maintenance, and operations are diminishing. Navy exchanges will need to rely more heavily on self-generated profits to sustain themselves. This paper focuses specifically on the fueling operations at the Navy Exchange Gas Station, Naval Postgraduate School (NPS), Monterey, California. However, the circumstances faced, and the approach used to review this entity, have similarities with many of the 108 other Navy Exchange operated fueling facilities throughout the Continental United States (CONUS).

Additional pressures beyond funding shortfalls are faced by the gas stations as increasingly more stringent environmental regulations take effect. These new laws and regulations require expensive equipment and facility upgrades to avoid costly clean-ups and/or fines. The State of California is well known as having some of the toughest environmental laws in the country. Department of Defense policy is to have bases comply with the relevant state and local environmental laws.

In October 1992, the Federal Facility Compliance Act of 1992 was signed by President Bush. It furthered strengthened DOD environmental policy. This act makes federal facilities subject to administrative orders, fines and penalties from the

Environmental Protection Agency or authorized state/local agencies for non-compliance with solid waste or hazardous waste regulations. The act also removes sovereign immunity, previously afforded to federal activities in environmental matters. Indications are that any fines and penalties will be paid from appropriated funds other than the past "judgement account." This change greatly increases the environmental liability faced by all DOD activities.

In July 1992, during annual tank testing, the Navy Exchange at NPS Monterey discovered that a 10,000 gallon underground storage tank was cracked. An undetermined amount of fuel was lost into the soil before the damage was discovered. This requires a follow-on ground study to determine the amount of contamination and the extent of clean-up required.

This study will examine current costing practices of the Navy Exchange Service Station's Fueling Operations, Department J-3. It will also review the costs and benefits of future fueling facility upgrade options available to the Navy Exchange and Postgraduate School. Recommendations will be aimed at improving costing figures and minimizing future environmental liabilities. However, this study will not discuss which funding sources should be used to implement the recommendations, nor which department at the Naval Postgraduate School should be the action code.

A. BACKGROUND

Navy Exchange service stations are big business. Annual worldwide fuel sales were $134.6 million for NEX fiscal year 1992 which ended in January 1993. These sales have resulted in an average profit of 11.5 percent.[Ref. 1] The evolution of stricter environmental regulations and appropriated funding cuts make it prudent to consider all relevant costs in current and future upgrade decisions.

The operation of modern Navy Exchange stores and outlets can be traced back to 1946. A 1945 Secretary of the Navy study, headed by Captain Wheelock H. Bingham, SC, USNR, recommended consolidating Navy resale activities into a chain of retail stores with centralized direction and guidance [Ref. 2:p. 13]. As early as 1939, the Navy operated service stations through the Ships Stores program, the forerunner of the Navy Exchange system [Ref. 3].

In 1949, the House Armed Services Committee published the Armed Services Exchange Regulations (ASER). These regulations apply to exchanges operated in the continental United States, and provide a list of authorized resale items exchanges can carry. Since being updated and revised in 1956, the list has remained relatively constant. The House Armed Services Committee also impacts exchange policy through statements and decisions reached during committee hearings. The 1949 ASER was accompanied by several committee statements: the committee would continue to be concerned with competition

between the exchanges and local merchants [Ref. 4:p. 3551], exchanges would not be the sole provider of goods and services for the serviceman [Ref: 4:p. 3757], and exchanges would not supply the total funds needed for recreational and welfare activities [Ref. 4:p. 3543].

The Navy Exchange Mission statement is set down in the Navy Exchange Manual as follows:

> The mission of an exchange is to provide a convenient and reliable source from which authorized patrons may obtain at the lowest practicable cost, articles and services required for their well-being and contentment; to provide, through profits, a source of funds to be used for the welfare and recreation of Naval personnel; and to promote the morale of the command in which it is established through the operation of a well managed, attractive and serviceable exchange. [Ref. 5:para. 1211]

The Navy Exchange is not a traditional business "profit-oriented" operation, but the profit objective is manifested in its overall mission. This mission requires generating revenues above minimum operating costs to sustain operations and provide funding for base morale, welfare and recreation (MWR) programs. In 1991, MWR received 83.3 million dollars from 1990 Navy Exchange sales of two billion dollars. The Navy's net profit in 1990 exceeded 100 million dollars for the first time, though projected defense reductions are expected to reduce future total sales volume by up to 20 percent [Ref. 6].

For Navy exchange service stations in CONUS, the Navy Exchange Manual provides general operating goals for fueling operations, Department J-3 Fuels. Targets to Sales of Gross

Profit 14%, Expenses 7%, and Net Contribution 7% have been established for the service stations. The NPS NEX gas station's past five fiscal year averages are; Gross Profit 14.4%, Expenses 5.6%, and Net Contribution 12.6%.

B. OBJECTIVES

This study will identify how costing allocations are made at the Navy Exchange Gas Station. It will then review these practices to provide a complete cost/benefit picture. This information can be used to improve the cost data for future upgrade and maintenance decisions involving the facilities. This is becoming more critical in light of both the funding reductions currently being experienced by the military services, and the growing complexity and expense of complying with increasingly stringent environmental regulations.

Additionally, this paper will determine if the facilities upgrade options faced by the Navy Exchange are financially justified, and which one of the three possible fuel tank upgrade options is the most desirable. A default option to close the service station has also been kept open in the event data analysis reveals all upgrade options are too costly.

C. RESEARCH QUESTIONS

The primary research question is: what are the complete costs of operating and maintaining the Navy Exchange Service Station fueling operations at the Naval Postgraduate School,

Monterey, California? The reported costs will be verified and modified where necessary to capture all costs incurred in Department J-3, Fueling Operations. Secondly, the analysis will consider the impact of mandatory compliance with increasingly stricter environmental regulations and growing environmental liabilities faced by the Navy Exchange Gas Station. Potential facility upgrade options will be reviewed considering these factors.

A third concern is to estimate the value placed on the Navy Exchange gas station by the authorized DOD patrons. This will help determine the demand for continued Navy Exchange fueling operations, considering that several commercial service stations operate nearby. This analysis will consider savings provided to DOD personnel through exchange fuel purchases compared to the civilian market. This depends on the customer's price sensitivity to fluctuating fuel prices and the location of the service station. Located adjacent to the main NEX retail store, the gas station is a potential business draw to the main store.

D. SCOPE, LIMITATIONS, AND ASSUMPTIONS

1. Scope

In this study, data for one individual activity, the Navy Exchange Gas Station, Naval Postgraduate School, Monterey, CA, was collected and analyzed. Only the Fuels Department, Cost Center J-3, was examined, separating this

portion of the service station from the Automotive Service Department, J-5. Civilian service station cost categories for which the NEX gas station has no equivalent were estimated at the prevailing rates for a similarly sized civilian station. Though not used in the cost analysis, this shows where the Exchange Station has cost advantages compared to civilian stations. These costs include insurance, federal and some state taxes, local business fees, and local sales taxes. The government is exempt from these costs. The study also identifies NPS station funds used by the exchange service station, but not recorded against NEX cost accounts.

In addition to reviewing the NEX gas station, the NPS student population was surveyed to gauge the value placed on the service provided by the Navy Exchange gas station.

The study did not review any future site locations for the NEX gas station that might minimize potential environmental hazards. For example, siting the facility in an area with a lower water table would reduce environmental risks. At the current location, the water table is recorded as 18 feet below the surface, but it has been recorded as high as six feet from the ground surface.

No other departments onboard the Naval Postgraduate School were considered for funding needs. Thus, it is impossible to rank competing requirements for limited appropriated funds.

2. Limitations

One of the study's main limitations was assessing the cost of removing and reclaiming the site of the leaking fiberglass underground storage tank (UST). The tank removal is straightforward, however soil contamination will only become known through physical testing.

Other limitations are the uncertainty of whether military installations will remain in the Monterey area and the requirements of future environmental regulations. The scheduled downsizing of nearby Fort Ord, and the possible closure of the Defense Language Institute (DLI), will have an undetermined impact on the customer base and future sales of the Navy Exchange Service Station. Additional uncertainty arises from environmental regulations. They are continually becoming stricter. This adds costs to compliance efforts. Without knowing future laws, the study focused on meeting current laws. Compliance milestones are already identified for upcoming mandated program changes.

In addition, it is difficult to quantify how much business the gas station draws to the main retail store, and how strongly the gas station is valued by the customers. These questions do not lend themselves to empirical data.

The volume of total fuel sales by year and type of fuel was not available for the financial periods reviewed. This made it impossible to ascertain with certainty if sales

dollar fluctuations resulted from changes in the volume of fuel sold or the price of the fuel sold.

The size of the customer base of the NEX gas station was not available with any level of accuracy due to the lack of consolidated data on the number and location of military retirees and their dependents living in the Monterey Bay area. Similarly, data on the number of active duty service members, and their dependents, who are registered at other area military installation but use the NEX gas station is not available.

Finally, regardless of the study's recommendations, funding will be required for the upgrades. The study's recommendations are made without considering future funding climates. Funding limits may actually lead to implementing a sub-optimal upgrade alternative.

3. Assumptions

Thus study assumes that the Navy Exchange Gas Station will continue to operate in the future. To do so will require facility upgrades to meet scheduled 1998 environmental legislation. It was also assumed that appropriated station funding will continue to decrease as the military services downsize. This requires more accurate and defendable costing figures.

Further more, it is assumed that the amount of annual fuel volumes sold will remain relatively constant, and that

sales dollar values are closely tied to fluctuations in the consumer price index for motor fuels.

4. Study Organization

Chapter I is an introduction to the research project.

Chapter II presents a brief history of the Navy Exchange CONUS fueling operations, focusing on the NPS gas station. This is followed by a discussion of the environmental regulatory climate faced by the NPS Navy Exchange service station.

Chapter III discusses the methodology used to collect data and associated problems.

Chapter IV presents the data, including costs, benefits, a gasoline market price survey, a customer survey, and facilities upgrade alternatives to meet scheduled 1998 environmental regulations.

Chapter V analyzes and interprets the data, and reviews the upgrade alternatives.

Chapter VI includes conclusions, recommendations and general comments on the research process, including areas of possible future study.

II. BACKGROUND

A. THE NPS NAVY EXCHANGE GAS STATION

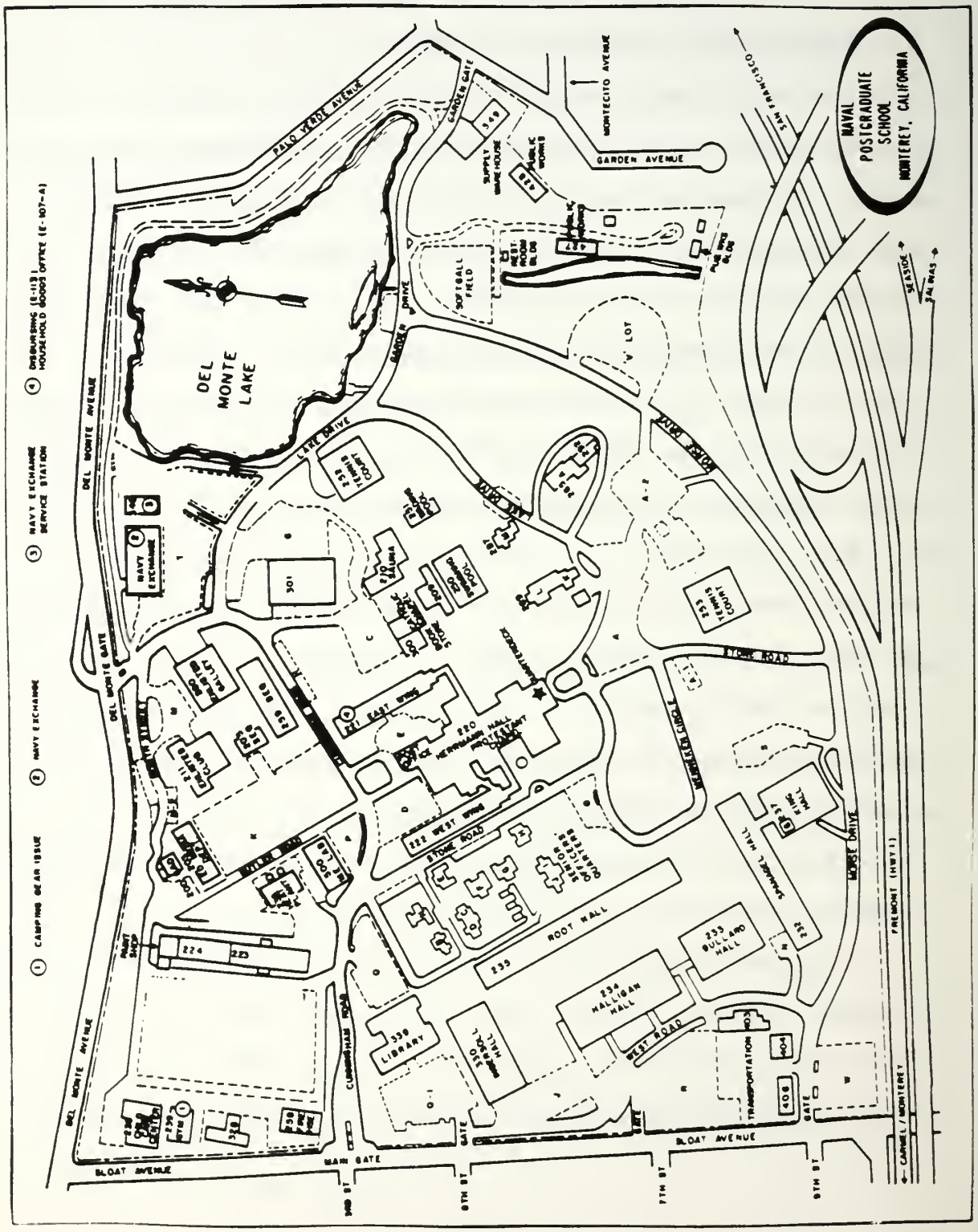
The Navy Exchange gas station is located on the Naval Postgraduate School's western boundary, adjacent to Del Monte Lake. A location map is on the following page, Exhibit 1. The ground water table is approximately 18 feet below the ground surface at this location, but it has been recorded as high as six feet from the ground surface. Regulations are more stringent for sites having ground water levels less than 20 feet below the ground surface, and proximity to Del Monte lake raises concerns about potential fuel spills.

The exact date of the gas station's initial operation is not documented by base records at the Public Works Department or the Public Affairs Office. However, a Navy Exchange Service Station employee, who began working for the Exchange in 1965, indicated that the service station was originally located near the present site of the NPS Fire Station. He believed the Navy gas station began operating at that original location sometime in the 1940s.[Ref. 7]

A review of NPS Plant Property Records indicates that the present service station was built in 1970 at a cost of $233,033. Operations began in 1971 or 1972. The current plant value of the facility is carried at $753,000.[Ref. 8]

EXHIBIT 1

NEX GAS STATION LOCATION
NPS, MONTEREY, CALIFORNIA



The NPS Exchange gas station is typical of most Navy Exchange service stations. The service station has three underground gasoline storage tanks. Three underground tanks is the average number found at Navy exchange stations. The average age of the tanks at NPS is 22.7 years. This compares closely with the Navy exchange wide average tank age of 21.9 years for the exchange's 369 total tanks.[Ref. 3] The underground storage tanks (UST) service three fuel islands through piping that links with sixteen fuel nozzles. Gasoline sales are collected by a clerk. The clerk also runs a small automotive parts store and collects payments for work completed by exchange mechanics in the adjacent automotive shop, Department J-5.

The three tanks at the Navy Exchange service station include Tank # 348-1, a 10,000 gallon single-walled fiberglass tank constructed in 1973; Tank # 348-2, a 15,000 gallon single-walled steel tank constructed in 1969; and Tank # 438-3, a 20,000 gallon single-walled steel tank also constructed in 1969. Existing records do not indicate the exact dates the tanks were installed and placed in service, so manufactured dates are used for this study (the earliest the two steel tanks could have been installed was 1970 when construction began on Building 348).

The fiberglass tank, # 348-1, was emptied and taken out of service in July 1992. A leak was discovered at the base of the filler neck during an annual tank pressure test. A

contract is being processed to remove the damaged tank and remediate any soil contamination. One of the station's three service islands was taken out of operation when the tank was closed because of piping configurations.

With the two remaining serviceable steel tanks, the Navy Exchange sells regular unleaded and super unleaded gasoline. This gasoline is received through a regional NEX contract that services twelve other Navy/USMC facilities in central California. The contract is administered by the Navy Exchange Center (NEXCEN) in San Diego, California. The current vendor is Exxon, but the gasoline brand can change depending on the supply contract in place.

The station has a new vapor recovery system. New fuel lines were installed from the tanks to the pumps in 1991 [Ref. 9]. In addition, the tanks have an automatic inventory control monitoring system. However, the inventory control system is not sensitive enough to meet leak detection requirements under the existing environmental laws. It needs to be replaced, or supplemented, with a more accurate leak detection and alarm system.

Gasoline sales for the NPS Navy Exchange have been very profitable. Gross Profits to Sales have averaged 15.6%, and Net Contribution to Sales 10.4% during FY 1982 through FY 1992. (The Navy Exchange Fiscal Year begins and ends after the third week of January.)

B. ENVIRONMENTAL REGULATIONS

The Navy Exchange gas station falls under the environmental purview of the state of California Water Resources Control Board. This agency has incorporated much of the Code of Federal Regulations (CFR) for Underground Storage Tanks (40 CFR 280) into the California Code of Regulations (CCR). The Federal Regulations were developed under the 1984 Hazardous Solid Waste Amendments (HSWA) to the Resource and Recovery Act (RCRA). The Federal regulations allow the State of California to regulate underground Storage tanks (USTs) under state law. Locally, the Monterey County Board of Health administers the UST program and conducts periodic enforcement inspections of the Naval Postgraduate School.

The liability of Federal facilities greatly increased after the Federal Facility Compliance Act of 1992 was enacted. Signed by President Bush in October 1992, the act subjects federal facilities to administrative orders, fines and penalties from either the Environmental Protection Agency or authorized state and local agencies if they do not comply with solid or hazardous waste regulations. The act also removes sovereign immunity, previously afforded to federal activities in environmental matters. It appears that any future fines and penalties will have to be paid from appropriated funds, rather than from central "judgement accounts." The current legal climate is intended to increase incentives for all federal activities to comply with environmental regulations.

The Radian Corporation completed a retrofit study of USTs at the Naval Postgraduate School in July 1992. They noted several areas in the California Code of Regulations (CCR) Title 23 (Waters) with which NPS must comply:

- New underground storage tank construction and monitoring standards;
- Existing underground storage tank monitoring standards;
- Release reporting and initial abatement requirements;
- Repair and upgrade requirements;
- Closure requirements;
- Categorical and site-specific variance procedures; and
- Permit application, quarterly reports, and trade secret requirements.

Specific applicable environmental regulations are summarized in Appendix A.

The Navy Exchange must take action to fully comply with environmental regulations. The 10,000 gallon cracked fiberglass tank must be removed and any contaminated soil remediated. Initial attempts have been made to solicit small purchase bids to remove the tank [Ref. 10] No bids had been received as of March 1993. Small purchase regulations prohibit awards above $25,000. The most recent estimates place the tank removal costs at around $50,000 [Ref. 11].

The current fuel inventory monitoring system is not sensitive enough to qualify as an approved leak detection system. Leak detection equipment will be required on all

existing tanks by 22 December 1998, per CCR 23, Article 4, Section 2641. The system in place is designed to detect leaks of 10.0 gallons per hour. Current environmental regulations require a system capable of detecting leaks of 0.1 gallons per hour. As an alternative to tank level monitors, vadose zone or groundwater monitoring equipment may be installed below the tanks. The vadose zone is the ground layer above the permanent ground water level. This zone is monitored because it can occasionally contain rain water that could be contaminated from fuel spills. In the absence of such systems, the regulations allow continued operations of service stations with the use of monthly statistical analysis called Statistical Inventory Reconciliation (SIR). The Navy Exchange is using this procedure to comply with the regulations. Daily inventory changes are determined from UST stick readings. They are reviewed under SIR and compared to gasoline sales volumes over a monthly period. Discrepancies in the SIR records are used to pinpoint leaks that may otherwise go undetected. Firms authorized to conduct SIR analyses are identified by the State of California. The cost is borne by the using activity.

Annual tank pressure testing is required for USTs using SIR, according to CCR 23, Article 4, Section 2641. Under current arrangements, NPS funds the tests for all six of the base USTs requiring it. The three other USTs requiring testing belong to the NPS Public Works Department. The cost

to test the three Navy Exchange tanks was $1,540 in 1992, and $1,250 in 1991 [Refs. 12 & 13].

III. METHODOLOGY AND DATA BASE

A five step methodology was used to determine costs and benefits of operating the Navy Exchange gas station:

1. Background research and interviews
2. Data collection/ customer survey
3. Gas station operating cost summary review
4. Gas station revenue summary review
5. Analysis of data

A. BACKGROUND RESEARCH AND INTERVIEWS

1. Background Research

This study began by reviewing the relevant literature in several areas, including:

- Existing studies on the Navy Exchange system;
- State and Federal environmental regulations relevant to gasoline service stations;
- The mission and policy statements set forth in the U.S. Navy Resale Manual regulations on Navy Exchange gas stations;
- Two recently completed local contracted studies on Naval Postgraduate School Underground Storage Tanks;
- Articles in petroleum trade journals to learn industry trends in service station operating methods and storage tank configurations;
- Government Accounting Office (GAO) reports on environmental issues and military exchanges;
- Minutes from a House Armed Services Congressional Subcommittee hearing on military exchanges;

- Financial records of past construction and maintenance contracts;
- The five year financial operating records for the NPS Navy Exchange, FY 1988 through FY 1992, and;
- Local taxes and business license fee structures for nearby civilian gas stations.

2. **Interviews**

Initial and follow-up interviews were conducted with the NEX Services Operations Group headquarters in Staten Island New York, the NPS NEX Officer, the Exchange Services Outlet Manager, the Service Station Manager, the NEX Support Services Supervisor, the NPS Public Works Officer, the NPS Environmental Coordinator and the NPS Resident Officer in Charge of Construction. These interviews recorded background information and identified support inter-relationships between NPS departments and organizations with ties to the NEX service station. The interviews primarily helped identify government costs not recorded in existing Navy Exchange service station financial statements. These costs were absorbed by other NPS departments. The interviews also identified costs that would have occurred if the service station was a civilian entity. Finally, interviews were conducted to determine how personnel costs and expenses for budgeting and reporting are derived.

B. DATA COLLECTION AND SURVEY

1. Data Collection

The majority of the cost and revenue data was obtained from records maintained by the Navy Exchange on standard NEX cost reports. Five years of data was reviewed, beginning with FY 1988 and ending with FY 1992. (The NEX fiscal year begins and ends in January.) Single event costs, such as construction and maintenance projects, were collected from the NPS Resident Officer in Charge of Construction Office. Future upgrade costs were referenced from Naval Facilities Engineering contract studies concerning NPS Underground Storage Tank Management Plans [Ref. 14]. 1992 fuel price data at NPS, Fort Ord and local service stations was also collected.

Capitalization costs of the service station facilities were not included because the age of the physical plant was beyond the twenty year time frame over which assets are normally fully depreciated. Costs for the vapor recovery system, installed in 1991, were capitalized and tank testing was included as an annual expense.

2. Survey

A customer survey was conducted to determine the value of the Navy Exchange gas station's service to the active duty student population. Six hundred surveys were randomly distributed among the 1,800 students at the Naval Postgraduate

School, excluding foreign exchange officers. Also excluded were approximately 200 active duty NPS staff personnel, and an undetermined number of military retirees and their dependents who use the NEX gas station. Initially, attempts were made to obtain access to retired personnel through the NPS vehicle registration records. However, these records were not available due to Privacy Act concerns. An estimated 7,000 retired personnel with 17,000 dependents reside in the Monterey Bay area, according to the Fort Ord Re-use Task Force, a civilian organization chartered to study conversion uses for Fort Ord after it downsizes [Ref. 15].

The sample population of active duty students was considered sufficient to gauge the feelings of exchange patrons. The Navy Exchange charter is directed at providing active duty service members with products at discounts. Retirees in an area are able to capitalize on services if available. While Navy Exchange financial personnel estimate that retirees comprise approximately 60% of the exchange's business, the exchange would not be able to operate a service station without the active duty student population. The survey also provided some feedback on whether the gas station draws patrons to the adjacent main exchange store. Finally, the survey indicated whether patrons are aware of prices charged in the nearby civilian market.

Assuming a normal population of 1,800, 600 surveys were randomly distributed. A total of 189 surveys were

returned, providing a 95% confidence level, with a plus or minus 6.8% margin of error.

C. GAS STATION OPERATING COST SUMMARY

Operating costs were collected from existing NEX financial reports for the NPS Exchange outlets, specifically the SC05 and SC06 reports for the period FY 1988 through FY 1992. Using a five year period smooths the costs and shows how they are related. Budget plans were compared to actual performance to determine whether year to year budgeting has been accurate.

Additional government costs were collected from sources outside of the Navy Exchange for improvements and maintenance not funded by the exchange, and for cost breaks enjoyed by the exchange on federal taxes, property taxes, business license taxes, and insurance.

Future tank and facility upgrades to comply with environmental regulations were obtained from a study completed in July 1992. These were done for the Naval Facilities Engineering Command by Radian Corporation. Adjustments were made to Radian Corporation's estimates for improved accuracy due to situations that have changed since then.

D. GAS STATION REVENUE SUMMARY

Navy Exchange gas station revenues were taken from the NEX SC05 financial reports for the years FY 1982 through FY 1992. An 11 year performance period was used to review sales, gross

profit and net contribution. The data were used to determine conservative future net contribution values. President Clinton's proposed BTU energy tax will raise expenses at competing commercial gas stations but will not affect the NEX service station's costs. The NEX service station is exempt from federal fuel taxes. Any increased price differential should increase gasoline sales and revenues at the NPS station, assuming other costs remain constant compared to civilian stations.

E. ANALYSIS OF DATA

Chapter V analyzes the data collected and applies cost/benefit methodology to determine if costing methods in use are accurate, and which of three upgrade alternatives to meet 1998 environmental regulations is best justified.

The analysis includes operating costs not currently applied to the NPS gas station, but absorbed by other departments or agencies of the Federal government. The analysis also considers the tangible and intangible benefits service members receive from the exchange gas station, whether the gas station draws business to the main exchange, and if customers are price sensitive to fuel costs.

IV. PRESENTATION OF DATA

Chapter IV presents financial and survey data collected during the course of this study. Fueling operations at the gas station have been very profitable for the Navy Exchange. Gross profits averaged 15.6% of sales, and net contributions 10.4% of sales, over the past eleven fiscal years (FY 1982 through FY 1992).

A. BENEFITS/COSTS

The Navy Exchange collects costs using standard cost reports established by the Navy Exchange system. The primary references used in this review were the SC05 and SC06 reports for Department J-3, Fuels. Reports for the five year period FY 1988 through FY 1992 were collected to review accounting practices. In addition, eleven years of data, FY 1982 through FY 1992, was reviewed for performance of sales, gross profits and net contributions. These fiscal year periods provide a reference for trend identification. They are the most recent complete fiscal year data currently available. The five year period is presented in comparative financial statements. These include budgeted sales and budgeted gross profits compared to actual sales and gross profits. The station has been in continuous operation during the time periods reviewed,

with the exception of disruptions in June and September of 1991 to install a fuel line vapor recovery system.

The additional six years of sales, gross profit and net contribution data was collected to improve future performance predictions. Future net contribution predictions are needed because one of the potential upgrade options has a different impact on revenue in-flows than the others. A summary of historical data is presented in Table 1.

For the review of the five year financial data, each report is discussed in the order categories appear on the SC05 and SC06 reports for Department J-3, Fuels. Financial categories are placed together on tables to show the five year trends.

1. SC05 Report Categories For Department J-3

The SC05 Report provides an overall department cost/performance summary. The SC05 reports for FY 1988 through FY 1992 are contained in Appendix B. Table 2 provides a comparative five year statement with selected categories. A discussion of each category follows.

a. Budgeted Sales

The NEX Service Outlets Manager estimates the annual budgeted sales category by 1 December of the year

TABLE 1

SUMMARY OF SALES, GROSS PROFIT, AND NET CONTRIBUTION
FY 1982 - 1992

DEPARTMENT J-3, FUELS,
NEX, NPS, MONTEREY, CALIFORNIA

(DOLLARS)

FISCAL YEAR	SALES	GROSS PROFIT	NET CONTRIBUTION
1982	1,635,684	167,358	72,433
1983	1,685,413	201,765	124,184
1984	1,665,592	218,257	146,500
1985	1,637,458	207,867	136,024
1986	1,092,263	200,213	138,265
1987	1,271,453	208,371	140,037
1988	1,370,367	260,509	182,256
1989	1,569,788	285,290	186,952
1990	1,863,381	323,800	230,619
1991	1,285,657	218,810	147,803
1992	1,799,020	336,459	248,120
AVERAGE	1,534,189	238,973	159,381

TABLE 2
SC05 REPORT SUMMARY
DEPARTMENT J-3, FUELS
FIVE YEAR PERIOD

(DOLLARS)

	FY 88	FY 89	FY 90	FY 91 **	FY 92
Budgeted Sales	1,284,400	1,333,949	1,541,238	1,553,000	1,462,561
SALES	1,370,367	1,569,788	1,863,381	1,285,657	1,799,020
COGS	1,109,858	1,284,498	1,539,581	1,066,847	1,462,561
Budgeted Gross Profit	183,120	194,402	231,186	248,480	163,228
GROSS PROFIT	260,509	285,290	323,800	218,810	336,459
PAYROLL	51,466	55,008	55,008	43,382	57,950
EMPLOYEE BENEFITS	12,276	12,816	13,056	8,986	11,459
OTHER DIRECT EXPENSES	13,443	29,582	24,829	18,393	17,304
EQUIP.> DEPREC.	1,065	466	287	245	1,625
TOTAL EXPENSES	78,250	98,315	106,236	71,006	88,338
NET DEPT. CONTRIB.	182,256	186,952	230,619	147,803	248,120

** Gas station was closed for two non-consecutive months during FY 91

preceding the performance period. The new fiscal year period begins with the start of the fourth week in January.

The budgeted sales figure is based on subjective estimates of individual monthly performance. These figures are combined to arrive at a yearly figure. The manager uses personal assessments, market trends, and previous departmental performance to determine a value. The budgeted sales number is important because it forms the basis for determining a local exchange's overhead charges. This is used to set the Navy wide NEX contribution to MWR programs and the total overhead charges paid to NEX headquarters for support functions.

b. Sales

Total actual sales are recorded from daily fueling sales receipts.

c. Budgeted Gross Profit

The budgeted gross profit is estimated by the Services Manager in concert with the budgeted sales figures. This is also based on subjective judgements and historical trends.

d. Gross Profit

The gross profit is calculated by subtracting the cost of goods sold (fuel) from actual sales.

e. Payroll

At the NEX NPS gas station, the payroll figures include two full time and three part time employees. One of the full time employees is the on-site supervisor for the service station. This supervisor's time is totally allocated to Department J-3, even though the position oversees three Departments: J-3, Fuels; J-5, the Automotive Shop; and H-9, the Automotive Parts Store.

f. Employee Benefits

Recorded employee benefits are compiled from breakdowns provided by the SC06 Report. These breakdowns include several categories from the Navy Chart of Accounts in the Navy Exchange Manual, including: Provisions for Annual Leave, Account 312; Taxes and FICA, Account 316; and Retirement Annuity contributions, Account 318.

g. Other Direct Expenses

Like employee benefits, other direct expenses include breakdowns from the SC06 Report. They are: Stationary and Supplies, Account 313; Repairs and Minor Replacement, Account 315; Utility Expense, Account 317; and Miscellaneous Expenses made up of two sub-accounts - Telephone, Account 303, and Miscellaneous Direct Expenses, Account 319.

h. Equipment Depreciation

The equipment depreciation category includes any fixed asset over $1,000 in value at the time of purchase. A master account is kept at NEX headquarters in New York. They track equipment on a depreciation schedule for each individual exchange. Depreciation is charged to the local exchange during the fiscal year. The depreciation schedule varies from item to item, depending on whether it is building improvements, computer equipment, or other types of equipment. For the NEX gas station, this category contains a $3,540 cash register system purchased in 1991 and a $3,743 service island kiosk purchased in March 1992.

2. SC06 Report Categories For Department J-3

The SC06 Report contains a more detailed cost breakdown than the SC05 Report. The SC06 reports for FY 1988 through FY 1992 are contained in Appendix C. The SC06 totals build some of the category totals in the SC05 Report. Table 3 provides a comparative five year statement with selected categories. A discussion of each category follows.

a. Provision for Annual Leave, Account 312

The length of employment service determines the amount of annual pre-established leave benefits for each employee. The total of all calculated leave benefits for the five employees in Department J-3 is charged to this account.

TABLE 3
SCO6 REPORT SUMMARY
DEPARTMENT J-3
FIVE YEAR PERIOD

(DOLLARS)

	FY 88	FY 89	FY 90	FY 91 **	FY 92
ANNUAL LEAVE PROVISION	5,624	6,076	6,657	8,906	8,051
TAXES-FICA	4,332	4,580	4,679	3,486	4,485
RETIREMNT ANNUITY	2,319	2,160	1,178	694	422
TOTAL EMPLOYEE BENEFITS	12,276	12,816	13,056	8,986	11,459
STATION-ARY & SUPPLIES	102	799	1,459	1,105	1,006
REPAIRS & MINOR REPL.MNTS	4,282	3,461	5,799	8,250	8,051
UTILITY EXPENSE	5,347	5,178	9,375	6,280	7,099
MISC. EXPENSE	3,710	20,144	8,195	2,757	1,147
TOTAL OTHER DIRECT EXPENSES	13,443	29,582	24,829	18,393	17,304
TOTAL EXPENSES	25,719	42,398	37,885	27,379	28,763

** Gas station was closed for two non-consecutive months during FY 91

b. Taxes - FICA, Account 316

The taxes for FICA (Federal Insurance Compensation Act) are computed for all Department J-3 employees at a rate of 7.59% of wages earned.

c. Retirement Annuity Contribution, Account 318

The costs allocated to the Retirement Annuity Contribution are matching contributions for employees who choose to voluntarily participate in the program.

d. Total Employee Benefits

This grouping includes the sum of the three previously discussed accounts: Provision for Annual Leave, Taxes - FICA and Retirement Annuity Contribution. It is included on the SC05 Report.

e. Stationary and Supplies, Account 313

Charges to stationary and supplies include costs of cash register tapes and sales receipts, courtesy paper towels and window washing supplies for gas station patrons. Also included are small quantities of absorbent material kept on-hand for minor oil and fuel spill clean-ups.

f. Repairs and Minor Replacements, Account 315

Repairs to pumps and associated equipment for individual occurrences under $1,000 are captured in Repairs and Minor Replacements. This includes replacement of hoses and nozzles damaged in the normal course of business. The

majority of the recorded charges have been for service calls by a local company to repair gasoline pumps and dispensers.

g. Utility Expense, Account 317

Total utility expenses include charges for electricity, water and sewage, and natural gas. Building 348 houses the automotive mechanics, Department J-5, the automotive parts store, Department H-9, and the cashier and supervisor for the fueling operations, Department J-3. The building is metered for electrical usage. The total usage is allocated to the different departments based on Public Works Department engineering estimates. These cost figures also include the electricity used by a base pump to aerate the adjacent Del Monte Lake. The electric use breakdown is 40% for Departments J-3 and J-5, and 20% for Department H-9.

Department J-3 also receives a 10% allocation of Building 348's water and sewage usage, and a 1% allocation of the natural gas usage.

h. Miscellaneous Expenses

Although the miscellaneous expense category includes five accounts under the SR06 Report, Department J-3 uses only two of these accounts: Telephone, Account 303; and Miscellaneous Direct Expense, Account 319. Building 348 Cleaning and Maintenance Service and Supplies, Account 304, is

fully allocated to the Automotive Shop, Department J-5. Under Miscellaneous Direct Expense the following types of costs have been recorded:

- Waste oil disposal. This charge has been shifting between Departments J-3 and J-5 on an alternating basis.
- NEX vehicle repairs. Includes repairs and upkeep on a government owned pick-up truck used by the NEX for official business.
- Film purchase and processing. Used to record facility conditions and for advertising purposes.
- Refunds for downward fuel price adjustments. Sometimes new advertised lower fuel prices are not immediately reset at the pumps to reflect the latest price. Refunds to customers who paid the higher previous price are charged to this account.
- Customer claim payments for substantiated damages. Occasionally the NEX receives payment requests for automotive repairs from water in the fuel or low quality gasoline products. If supported, the claims are paid.
- Fuel testing by an independent source to verify customer claims.
- Contractor construction claim payments for alterations and repairs that exceeded an original contract price.
- Low cost infrequent items that occur in the course of business. These items do not fit into any other established category and are hard to predict.

B. STATION UPGRADE ALTERNATIVES

Existing environmental laws require the owners of single walled steel underground storage tanks (USTs) to replace or upgrade their tanks by December 22, 1998. This is when new environmental regulations are scheduled to take effect. The NEX service station has two single walled steel tanks.

The NPS is beginning to remove and backfill the NEX service station's 10,000 gallon fiberglass UST which was taken out of service in July 1992. The tank will not be replaced at the time of removal.

Costs have been estimated for three options in a contracted engineering retrofit study of USTs at NPS. The study was conducted by Radian Corporation in July 1992 for the Western Division Naval Facilities Engineering Command. This was used in developing an overall NPS Underground Storage Tank Management Plan. This plan was completed in October 1992. A fourth option, to close the station, was considered appropriate if the alternatives did not produce a positive rate of return and/or the customer base did not support continued operations. The four alternatives identified in this study are:

- Alternative I - Retrofit the existing USTs in 1993 and replace them in 1998;
- Alternative II - Replace existing USTs in 1998 with new double walled fiberglass USTs;
- Alternative III - Replace existing USTs in 1998 with aboveground storage tanks (ASTs),and;
- Alternative IV - Remove the existing USTs in 1998 and close the gas station.

Radian Corporation's cost analysis considered initial and long term costs. They presented costs in 1992 present values. Radian assumed a 9% interest rate and ignored inflation.

Radian Corporation provided the following additional information on their cost analysis:

> The initial costs for each alternative were based on existing regulatory requirements and unit costs for implementing them. Long-term costs for alternative I consisted of monitoring costs and retrofit costs associated with compliance with the 22 December 1998 secondary containment requirements. Long-term costs associated with Alternatives II and III consisted of monitoring and permitting costs. Long-term costs were based on 15 years of tank operation. [Ref. 14:p. 5-1]

Radian also obtained cost information from several tank contractors located in Northern California. Finally, they based their estimates on as-built plans supplied by NPS personnel, considering the shallow groundwater conditions at the NEX gas station (around 18 feet) and current Federal and State of California environmental regulations applying to storage tanks. The Radian report refers to the NEX service station USTs under Group 3 Tanks, 348-1 through 3. Their estimates for each alternative are contained in Appendix D.

1. Alternative I - Retrofit Existing USTs

Retrofitting the existing USTs involves upgrading the three USTs at the service station in 1993 to meet applicable federal and state UST regulations through 1998. In 1998, double-walled tanks will be required. At that time, equipment that can be re-used from the retrofit will be retained for use on the new tanks. This would include reinstalling the Automatic Tank Gauging System (ATGS) and vadose zone monitoring and groundwater monitoring systems for the tanks.

Total costs for this option in present value 1992 costs is $130,862. When this estimate was completed, the fiberglass tank (# 348-1) was still in service.

2. **Alternative II - Replace Existing USTs With New**

This alternative replaces the existing USTs with new double walled fiberglass USTs in 1998. Replacement costs computed by Radian Corporation include equipment, labor, anticipated costs for replacing existing tanks and piping with double walled fiberglass tanks and piping, soil sampling and analysis, leak detection equipment, overfill/spill protection/ATGS equipment, tie downs, concrete removal and replacement, and backfill placement and compaction. Radian Corporation selected double walled fiberglass tanks to provide a mid-range conservative choice. Lower cost jacketed steel tanks represent the low cost end , and double wall steel tanks represent the high cost end. The 1992 present value of Radian Corporation's cost estimate for Alternative II is $172,040.

3. **Alternative III - Replacement with Aboveground Storage Tanks**

This alternative involves removing the existing USTs and replacing them with aboveground storage tanks (ASTs) in 1998. The Uniform Fire Code (UFC) restricts the size of ASTs for motor vehicle fuel to 6,000 gallon capacities. Radian Corporation summarizes the rationale for the tank size limitation as:

> (1) Provide containment in the event of an accidental spill, (2) provide a design which can be inspected and maintained, and (3) provide a design which meets current Federal and State regulations.... [Ref. 14:p. 5-13]

The size limitation on ASTs means NEX would need to install eight 6,000 gallon ASTs to meet the station's current 45,000 gallon fuel storage design capacity. Six ASTs of that size would be needed to exceed the current 35,000 gallon operating capacity provided by tanks 348-2 and 348-3.

Cost estimates provided by Radian Corporation are based on single wall steel tanks supported on concrete saddles within secondary spill containment structures. Radian Corporation's approach replaces each existing NEX gas station tank with only one new 6,000 gallon AST. Total planned station fuel storage capacity would drop from 45,000 gallons to only 18,000 gallons. The estimated present value costs as of July 1992 for Alternative III are $157,185. This estimate includes three new ASTs. In the analysis of the data in Chapter V, this upgrade is expanded to include eight ASTs needed to match the current design fuel storage capacity.

4. Alternative IV - Remove Existing USTs and Close the Gas Station

This alternative is appropriate if the value patrons receive from the NEX gas station is less than the cost of alternatives I-III. Costs to close and remediate the station site in 1998 are based on tank removals, soil testing and clean-up, back-filling and pavement repairs. The estimated

cost for this alternative is $112,000. Most costs in this estimate are common to the other Alternatives.

C. LOCAL GAS STATION PRICE SURVEYS

As required by the Navy Exchange Manual, surveys of local civilian service stations are performed monthly, and more often if the market becomes volatile. This ensures the NEX provides service members with quality products at comparable or lower prices than otherwise available. The NPS gas station's normal practice is to follow the fuel prices set by the Army's larger Fort Ord gas station eleven miles away.

The local civilian stations surveyed have been the ones most competitive with the NEX station in the past. These do not include several of the civilian gas stations located closest to NPS, which normally have fuel prices 8 - 10¢ per gallon higher than the exchange's.

The results from surveys conducted in FY 1992 for the two types of fuel sold by the NEX gas station, super unleaded and regular unleaded, are presented in Tables 4 and 5. Prices shown are per gallon, and the brand of gasoline sold is noted. The NEX NPS station sells gasoline procured from Exxon under a current regional NEX contract. The Army at Fort Ord also sells Exxon gasoline [Ref. 16]. Results of surveys conducted prior to FY 1992 were not available.

D. CUSTOMER GAS STATION SURVEY

Six hundred surveys were randomly distributed to a NPS student population of 1,800 assumed to be normally distributed. A total of 189 surveys were returned (31.7% of the total distributed).

The survey had three purposes: 1) Determine a qualitative value for the exchange service station by active duty patrons; 2) review whether the station's location, adjacent to the main exchange retail store, is a draw for retail business, and; 3) ascertain if service station customers are sensitive to fuel prices.

A survey questionnaire form is shown in Exhibit 2. Comments received on surveys are compiled in Appendix E.

E. COSTS EXEMPTIONS FOR THE NEX GAS STATION

The NEX gas station enjoys several cost breaks by virtue of its status as a Federal Government facility. These include exemptions on State and Federal income taxes, Federal fuel excise taxes (14¢ per gallon), local city business taxes, building permit fees and insurance premiums for environmental clean-up liability and workman's compensation. State excise and sales taxes are not paid directly by exchange patrons, but some State of California fuel taxes are paid by NEX as part of the total bulk fuel bill. This cost is passed along to patrons without adding the additional tax tier paid by civilian station customers. The State of California excise

TABLE 4

SERVICE STATION PRICE SURVEYS

REGULAR UNLEADED, PRICE PER GALLON

(DOLLARS) All Civilian Service Stations listed are in Monterey, California.

DATE 1992	NEX NPS (Exxon)	Ft. Ord (Exxon)	Mineas (Arco)	Webster (Exxon)	Light-house (Beacon)	Del Monte (Exxon)
03 FEB	0.989	0.99	1.03	1.03	1.03	0.99
21 FEB	1.02	1.03	1.03	1.05	1.05	1.03
01 APR	1.019	1.019	1.029	1.059	1.259	1.059
01 MAY	1.099	1.09	1.12	1.11	1.11	1.15
01 JUN	1.199	1.09	1.229	1.249	1.249	1.259
30 JUN	1.099	1.199	1.229	1.269	1.249	1.259
31 JUL	1.229	1.229	1.249	1.249	1.249	1.259
31 AUG	1.239	1.239	1.229	1.249	1.249	1.259
30 SEP	1.239	1.239	1.229	1.249	1.259	1.259
31 OCT	1.239	1.239	1.249	1.269	1.249	1.249
08 DEC	1.239	1.239	1.247	1.279	1.259	1.299
31 DEC	1.199	1.199	1.249	1.279	1.239	1.279

Source: NEX, NPS, Monterey, California

TABLE 5

SERVICE STATION PRICE SURVEYS

SUPER UNLEADED, PRICE PER GALLON

(DOLLARS) All Civilian Service Stations listed are in Monterey, California.

DATE 1992	NEX NPS (Exxon)	Ft. Ord (Exxon)	Mineas (Arco)	Webster (Exxon)	Light-house (Beacon)	Del Monte (Exxon)
03 FEB	1.249	1.17	1.16	1.21	1.19	1.21
21 FEB	1.17	1.17	1.17	1.21	1.19	1.25
01 APR	1.199	1.199	1.169	1.21	1.199	1.23
01 MAY	1.249	1.24	1.25	1.27	1.27	1.31
01 JUN	1.359	1.35	1.35	1.39	1.37	1.41
30 JUN	1.349	1.349	1.389	1.419	1.389	1.439
31 JUL	1.369	1.369	1.399	1.399	1.389	1.439
31 AUG	1.369	1.389	1.389	1.399	1.389	1.449
30 SEP	1.389	1.389	1.389	1.399	1.389	1.429
31 OCT	1.389	1.389	1.419	1.419	1.419	1.429
08 DEC	1.389	1.389	1.419	1.449	1.427	1.469
31 DEC	1.379	1.379	1.419	1.449	1.419	1.469

Source: NEX, NPS, Monterey, California

EXHIBIT 2
NEX GAS STATION SURVEY FORM

We want your opinion. This survey is to support thesis research on the Navy Exchange Gas Station. Your inputs will help determine the value placed on the availability of gasoline on base. Thank you for your time.

Please return completed surveys to NPS **SMC 1903.**

Check the blocks that most apply to you.

1. I am: Active Duty___, NPS Student___, Navy___, Army___, USAF___, USCG___, Other___ (_____).

2. I am: male___, female___.

3. Which type of fuel do you normally buy for your vehicle(s)?
super unleaded___ unleaded___ regular leaded___

4. Are you aware of gasoline prices in town compared to exchange prices?
Yes___, No___, Sometimes___.

5. How often do you (or your spouse) use the Navy Exchange gas station?
Almost everytime I fill-up___, Sometimes (every few months)___, Seldom (1 or 2 times per year)___, Never___.

If you answered "Never" to question # 5, skip to question # 10.

6. How do you feel about the gasoline quality at the Navy Exchange? Good___, O.K.___, Wary___, Poor___, Don't know___.

7. When you purchase gas on base, how often do you (or your spouse) also shop at the main exchange or outlet stores?
Always___, Usually___, Sometimes___, Seldom___, Never___.

8. The exchange gas station benefit is a right:
Agree___, Disagree___, Don't care___.

9. If the exchange no longer had a gas station, would you (or your spouse) change how frequently you used the main exchange and outlets? No change___, Would shop less often___.

10. If the exchange gas station were closed to provide more on base parking (leaving only the mechanics operating) would you

1	2	3	4	5
Strongly Approve	Approve	Neutral	Disapprove	Strongly Disapprove?

11. How strong are your feelings towards keeping the exchange gas station open?

1	2	3	4	5
Strongly Approve	Approve	Neutral	Disapprove	Strongly Disapprove

12. Optional Comments_____

tax at the pump is 17¢ per gallon and state sales tax is 7.25% of the sale price.

These cost breaks are presented to provide a clearer picture of the differences between the NEX gas station and the civilian service station business environment. A detailed analysis of these tax and fee exemptions are beyond the scope of this study. They are not used in calculating the cost of NEX operations to NPS. However, the data are used to determine estimated consumer and producer surpluses received by the NEX gas station from subsidies in the form of taxes and insurance breaks.

The Navy Exchange also receives benefits from the Naval station in the form of base support. This support includes fire and security services, environmental guidance and oversight benefits, and certain facility upgrades. The NPS station support is considered in determining NEX gas station operating costs. All these areas are discussed below.

1. **NEX Costs Breaks**

a. Federal Fuel Excise Tax

If the NEX gas station were required to pay this tax of 14¢ per gallon, they would have to decrease profit margin in order to remain competitive. For an approximate FY 1992 sales volume of 1,432,000 total gallons sold, this exemption represents a $200,480 annual cost that would be added to a civilian station's cost of goods sold.

b. State Taxes

The State of California fuel excise tax of 17¢ per gallon would cost the NEX gas station $243,440 for the 1,432,000 gallons sold from July 1991 to July 1992.

State sales tax of 7.25% times the $1,631,833 in NEX fuel sales for the one year period would have cost the NEX $118,308.

c. City Business Tax

The Naval Postgraduate School is located within the city limits of Monterey, California. The City of Monterey taxes local businesses based on their annual gross sales receipts. Tax formulas exist for three size categories. The NEX gas station would fall into the largest category. This group is defined as businesses with annual sales over $37,500. Based on the city's formula, the NEX gas station would have paid city tax of $2,245 in FY 1992. (An $86 flat annual fee, plus $3 tax per each $2,500 in gross receipts. NEX gas station sales in FY 92 were $1,799,020.)

d. Building Permit and Fees

The City of Monterey charges new businesses building permit and plan inspection fees based on square footage and estimated construction costs of a project. The station upgrade options under consideration would cost a civilian station $1,800 to $2,100 in permits and fees.

e. Environmental Liability Insurance

Civilian gas stations are required by environmental law to carry liability insurance for clean-up requirements in the event their fueling operations cause pollution. The NEX gas station is exempt from purchasing coverage because the Federal Government is self-insured. The insurance premiums vary with the size, location, and age of USTs. If a civilian entity, the NEX gas station could expect to pay about $5,000 in annual premiums for the required one million dollars of coverage.

f. Workman's Compensation Insurance

Any civilian business is required to provide workman's compensation insurance for its employees. Local civilian service stations pay annual premiums of $8,000 to $15,000 for their fueling operations. Additional premiums between $3,000 and $5,000 are paid for stations with automotive mechanics.

g. NPS Station Support

The NEX gas station receives several no cost services from NPS through an existing base host-tenant agreement. For example, NPS provides security and fire protection. Civilian stations would pay for these services through business taxes. This cost is not included in this study because the base would provide these services even without the NEX service station.

The Public Works Department provides environmental oversight for the NEX, and includes NEX USTs in the NPS Underground Storage Tank Management Plan without cost to NEX. Benefits from this action include annual tank testing costs (around $500 per tank) and the 1991 installation of a $105,100 vapor recovery project. This replaced the gas station's fuel line piping. These costs are not tracked by NEX financial reports, but they have been included in this study.

The existing host-tenant agreement also stipulates that the upgrade or replacement of existing USTs will be financed with appropriated station funds at no cost to the NEX. This support arrangement between the Navy Exchange and host station is typical on Naval bases and has been formalized in naval instructions. Bases provide support at no direct cost to exchanges because NEX services are considered an asset. The asset includes both services provided to military service members, and funds generated for Morale, Welfare and Recreation (MWR) programs. However, this item is under review at NPS and throughout the Navy due to the dollar magnitude of environmental upgrades under consideration.

V. DATA ANALYSIS

Collected data was reviewed for reasonableness, accuracy and completeness. Cost trends were analyzed for the past five fiscal years. Eleven years of sales, gross profits and net contributions data were collected and nine years of net contribution data was analyzed to project future values using least squares regression. Finally, FY 1992 statements were investigated to determine inputs to cost accounts. The results of this analysis are discussed in this chapter.

A. BENEFITS/COSTS

1. SC05 Report Adjustments For Department J-3

Cost categories presented on the SC05 Report are appropriate but several items required further examination. In addition to a discussion on budgeted sales and gross profits, four FY 1992 SC05 Report categories required adjustments to more accurately reflect costs: 1) Payroll; 2) Employee Benefits; 3) Other Direct Expenses; and, 4) Equipment Depreciation.

a. Budgeted Sales and Gross Profits

Budgeted sales and gross profit have been compared with actual sales and gross profits in each of the five fiscal years reviewed, FY 1988 through FY 1992.

Budgeted sales have ranged from 8.4% to 17.3% below actual sales. The one exception was FY 1991 when sales predictions were 20.8% above actual sales. This resulted from an unanticipated non-consecutive two month shutdown of the gas station during 1991. The shutdowns, in June and September of that year, were necessary to install a $105,100 fuel vapor recovery system. An artificial, proportional increase was added to those two months, inflating FY 1991 sales to determine a sales trend from FY 1982 through FY 1992. This trend was then compared to the consumer price index for motor fuels for the same period to back out inflationary effects. It was determined that sales were lost in a greater proportion than what could be accounted for by the sales adjustment. A plausible explanation is that additional time was required after reopening to re-establish the customer base lost during the shut-down. This was considered in estimating the payback periods of each upgrade alternative.

A similar percentage shift occurred when comparing budgeted to actual gross profit. Again, with the exception of FY 1991, all budgeted gross profit figures were lower than the actual figures by between 28.6% and 51.5%. For FY 1991 the budgeted gross profit was 13.6% above the actual gross profit.

The under-estimation of sales and gross profit represents a conservative budgeting approach by local NEX management. An explanation for the consistent under-budgeting is the procedure used to determine overhead payments owed to

NEX headquarters. Budgeted figures are developed and submitted to NEX headquarters. From Navy wide submissions, NEX headquarters develops overhead amounts each exchange will pay. For the NPS NEX, an overhead charge of around 1.8% of forecasted sales is used, but the rate can be as high as 2.8% depending on the activity. The total of all exchange inputs provides headquarters with their anticipated budget. The NEX system then makes a commitment to the MWR Program for the coming year, which develops its own future plans. The amount individual exchanges will pay during the year becomes fixed. This occurs regardless of actual sales and gross profit figures. Under-estimating of budgeted sales and gross profit is prevalent. This is because of the financial hardships over-budgeting would impose on exchanges whose sales fell short of targets. Adjustments to budgeted amounts are not forced on an exchange by headquarters unless projections are extremely inaccurate from year to year.

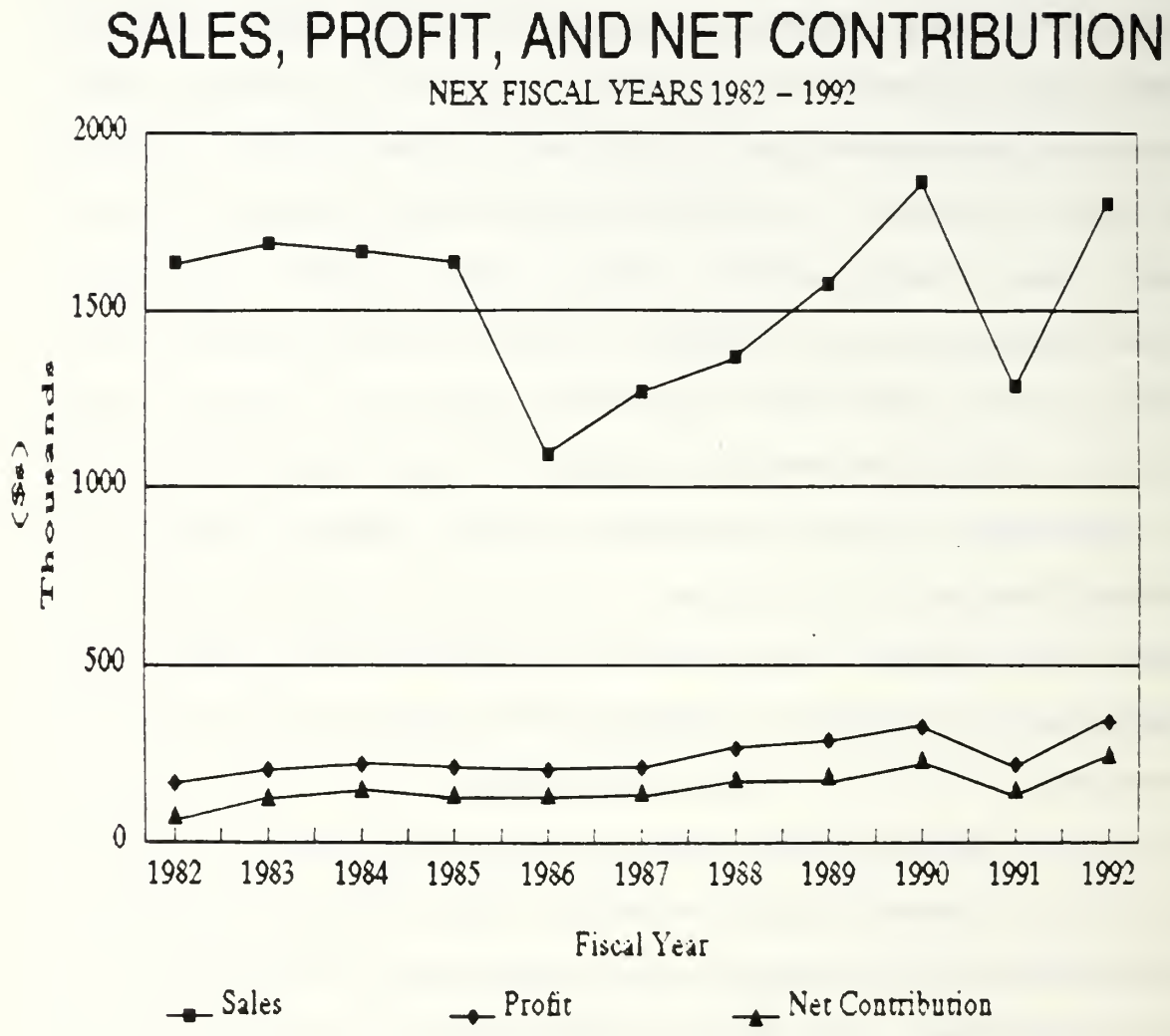
b. Actual Sales, Gross Profits, and Net Contribution

Eleven fiscal years (FY 1982 through FY 1992) of historical data for sales, gross profit and net contributions were collected, and net contributions were analyzed using least squares regression. Their performance was presented in Table 1, Chapter IV. It is graphed here in Figure 1.

Sales figures for FY 1982 through FY 1992 fluctuate, giving the impression of a dynamic market.

FIGURE 1

HISTORICAL PERFORMANCE
DEPARTMENT J-3, FUELS,
NEX, NPS, MONTEREY, CALIFORNIA



However, a review of the consumer price indexes for motor fuels over this period reveals movements that strongly coincide with the movement of NEX fuel sales (see Table 6). The sales figures and index movements, in conjunction with the stable gross profits and net contributions during this time frame, indicate that the quantity of gasoline sold by the NEX is fairly stable from year to year.

A stable sales volume implies a stable customer base. To investigate this idea, student population levels were obtained from the NPS Registrar's Office. Student populations were available only for FY 1987 through FY 1992. The figures ranged from a low of 1,623 students in FY 1988 to a high of 1,992 students in FY 1990. Since then, the student population has slowly declined to 1,809 in FY 1992. In addition, area retirees make up an estimated 60% of the NEX's customers. This supports the idea of a relatively stable customer base, contributing to stable annual fuel sales volumes.

Figure 2 shows consumer price indexes plotted against sales figures from FY 1982 through FY 1992. The index has roughly paralleled sales magnitudes. However, FY 1991 shows a large disparity between the movement in sales and the price index due to the station shut-down previously mentioned.

TABLE 6

COMPARISON OF SALES TO THE
CPI FOR MOTOR FUELS
FY 1982 - 1992

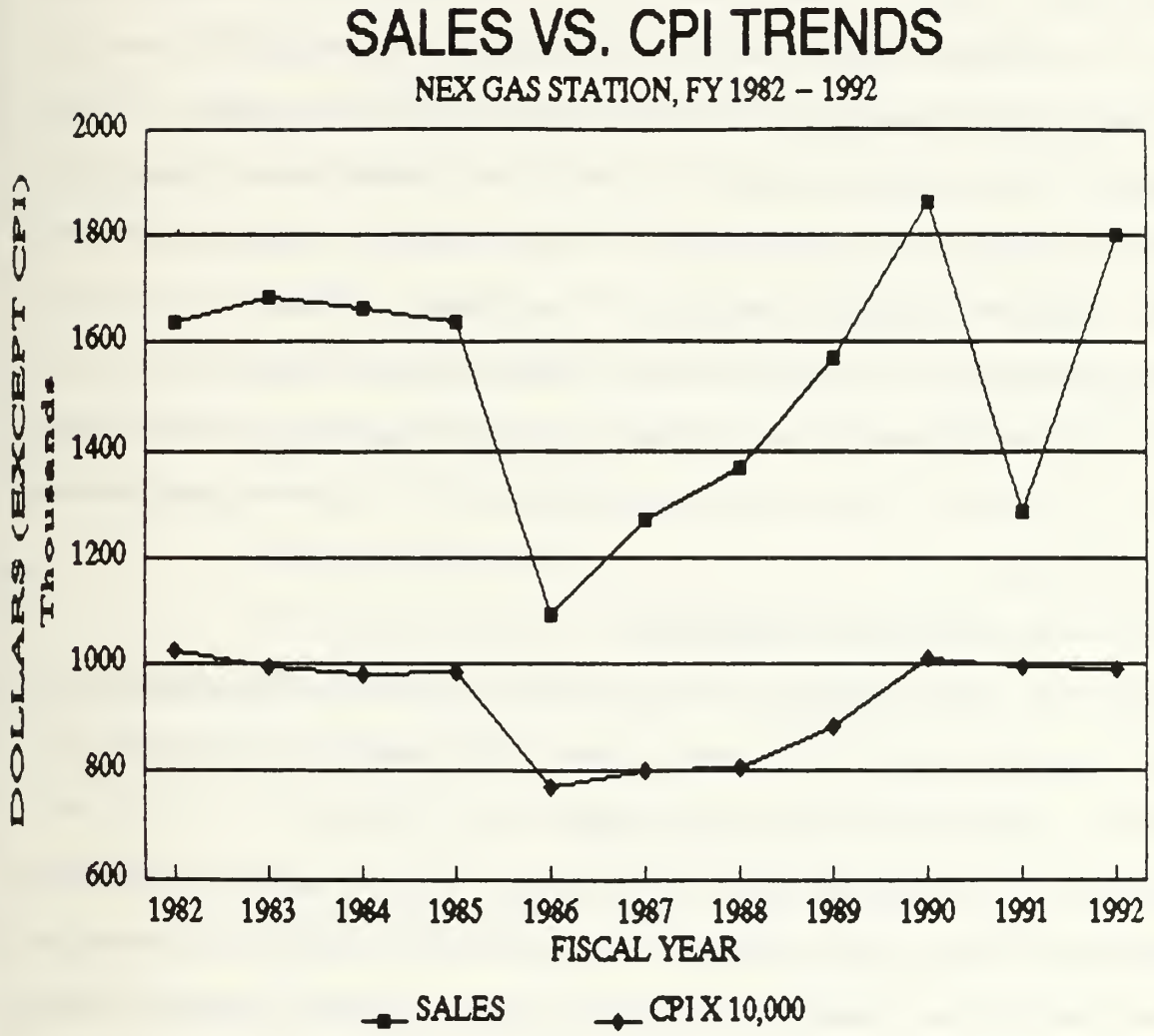
DEPARTMENT J-3, FUELS,
NEX, NPS, MONTEREY, CALIFORNIA

FISCAL YEAR	SALES ($)	CPI, MOTOR FUELS
1982	1,635,684	102.8
1984	1,635,684	99.4
1984	1,665,592	99.4
1985	1,637,458	98.7
1985	1,092,263	77.1
1987	1,271,453	80.2
1985	1,370,367	80.9
1985	1,569,788	88.5
1985	1,863,381	101.2
1991	1,285,657	99.4
1992	1,799,020	98.9

Sources: NEX Department J-3 sales are from SCO5 Cost Reports. The Consumer Price Index levels for motor fuel are from the "Economic Report of the President," January 1993, Table B-57.

FIGURE 2

DEPARTMENT J-3, FUELS
NEX, NPS, MONTEREY, CALIFORNIA



c. Payroll

Salaries and wages for two full time and three part time employees are allocated to Department J-3, Fuels. This includes 100% of the salary for a full time supervisor who also oversees the automotive mechanics working in the co-located Department J-5. Therefore, for the purposes of this study, the supervisor's personnel costs have been re-allocated: 50% to Department J-3, and 50% to Department J-5. The FY 1992 payroll account has been reduced by $7,000 (approximately one half of the supervisor position's payroll) to reflect this change. Efforts of this supervisor to oversee the automotive parts store, Department H-9, are not considered significant.

d. Employee Benefits

The benefits associated with the re-allocation of the supervisory costs reduce this SC05 account by $1,264.

e. Other Direct Expenses

Based on the two most recent tank testing contracts funded by NPS, annual tank testing costs of $1,500 ($500 per tank) have been added to miscellaneous direct expenses on the SC06 Report.

f. Equipment Depreciation

Equipment depreciation has been increased to cover the $105,123 station funded vapor recovery system installed June through September of 1991 [Ref. 9]. Based on a ten year

straight line depreciation, $5,256 has been allocated to FY 1991 depreciation (half-year convention), and $10,512 to FY 1992 through FY 2000. The remaining $5,256 is allocated to FY 2001.

2. **SC06 Report Adjustments For Department J-3**

The re-allocation of the Department J-3 supervisor's payroll and related benefits discussed in the SC05 Report section requires reductions in the Provisions for Annual Leave account of $728, and the Taxes-FICA account of $536. No revisions are warranted for Retirement Annuity Contributions. A reduction of $1,624 is reflected in the Total Employee Benefits account for FY 1992.

a. Utility Expenses

Utility expenses were determined to be reasonable with minor inaccuracies that are not significant; therefore, no statement adjustments were made for this item. Areas subject to interpretation are the cost to operate a Naval station pump from NEX's Building 348, and the engineering estimates which allocate the utility bill to the three departments sharing the building. Also, a station pump aerates the adjacent Del Monte Lake. The engineering estimates allocate 40% of the electric utilities to both Department J-3, Fuels, and Department J-5, Automotive Shop. The remaining 20% is allocated to Department H-9, Automotive parts store. In addition, Department J-3 is charged 10% of

the building's water usage, and 1% of the natural gas usage. The electric bill is by far the largest cost of utilities at between $750 to $800 per month. Department J-3's 40% portion amounts to between $3,600 and $3,840 per year.

b. Miscellaneous Expense

The NEX gas station is the most profitable service outlet run by the exchange with an average eleven year gross profit of 15.6% of sales (FY 1982-1992). As a result of operational realities, it often absorbs miscellaneous expenses that straddle less profitable departments. Examples are: (1) one half of waste oil disposal costs that had been divided between the automotive shop and the gas station on an alternating basis, (2) expenses for maintenance of an NEX government owned pick-up truck, and (3) the cost of film and processing for service station advertising and facility condition documentation. For the future, the NEX plans to fully allocate future waste oil disposal costs of approximately $800 per year to the Automotive Shop, Department J-5. This is more reasonable since these costs result from the operation of the automotive shop. Therefore, for the purpose of this analysis, $400 has been deducted from Department J-3, Fuels.

B. BENEFIT/COST PROJECTIONS

1. Adjusted SC05 And SC06 Reports

Using the revisions and adjustments previously identified for the SC05 and SC06 Reports, modifications have been made to the FY 1992 statement values presented earlier in Tables 2 and 3. The revised data is shown in Tables 7 and 8. Absolute value adjustments totalled $20,276. These values increase FY 1992 expenses by 4.2% ($3,748) and decrease total net contribution by 1.5%. Because of the small change, historical data was used without adjustments for projecting future net contribution values.

2. Net Contribution Projections

Net contribution data for fiscal years 1982 through 1992 was collected to project future net contributions. These projections are used to calculate the payback of the proposed upgrades. Future values were estimated using least squares regression analysis to reflect a best fit approximation to past performance. Data from FY 1983 to FY 1990 was used for this projection. FY 1982 data was disregarded because of its lower than expected net contribution in comparison to the 1982 motor fuel CPI, and FY 1991 data was disregarded due to the two month shutdown of the gas station that year. Net contributions were not revised for the previously described adjustments to the SC05 and SC06 Reports. Data are presented in Table 9 and Figure 3.

TABLE 7

ADJUSTED SCO5 REPORT FOR FY 1992

DEPARTMENT J-3, FUELS,
NEX, NPS, MONTEREY, CALIFORNIA

(DOLLARS)

	FY 92 RECORDED	FY 92 ADJUSTED	$ CHANGE
Sales	1,799,020	-	0
COGS	1,462,561	-	0
GP	336,459	-	0
Payroll	57,950	50,950	- 7,000
Employee Benefits	11,459	10,195	- 1,264
Other Dir. Expenses	17,304	18,804	+ 1,500
Equip. Deprec.	1,625	12,137	+10,512
TOTAL EXPENSES	88,338	92,086	+3,748
NET DEPT. CONTRIBUTION	248,120	244,373	-3,748

Note. Total additional cost adjustments of $3,748 represents a change of 1.5% from recorded NEX cost figures.

TABLE 8

ADJUSTED SCO6 REPORT FOR FY 1992

DEPARTMENT J-3, FUELS,
NEX, NPS, MONTEREY, CALIFORNIA

(DOLLARS)

	FY 92 RECORDED	FY 92 ADJUSTED	$ CHANGE
ANNUAL LEAVE PROVISION	6,551	5,823	-728
TAXES-FICA	4,485	3,949	-536
RETIREMENT ANNUITY	422	422	0
TOTAL EMPLOYEE BENEFITS	11,459	10,195	-1,264
STATIONARY & SUPPLIES	1,006	1,006	0
REPAIRS & MINOR REPLACEMENTS	8,051	8,051	0
UTILITY EXPENSE	7,099	7,099	0
MISC. EXPENSE	1,147	747	-400
TOTAL OTHER DIRECT EXP.	17,304	16,904	-400
TOTAL EXPENSES	28,763	27,099	-1,664

TABLE 9

NET CONTRIBUTION PROJECTIONS

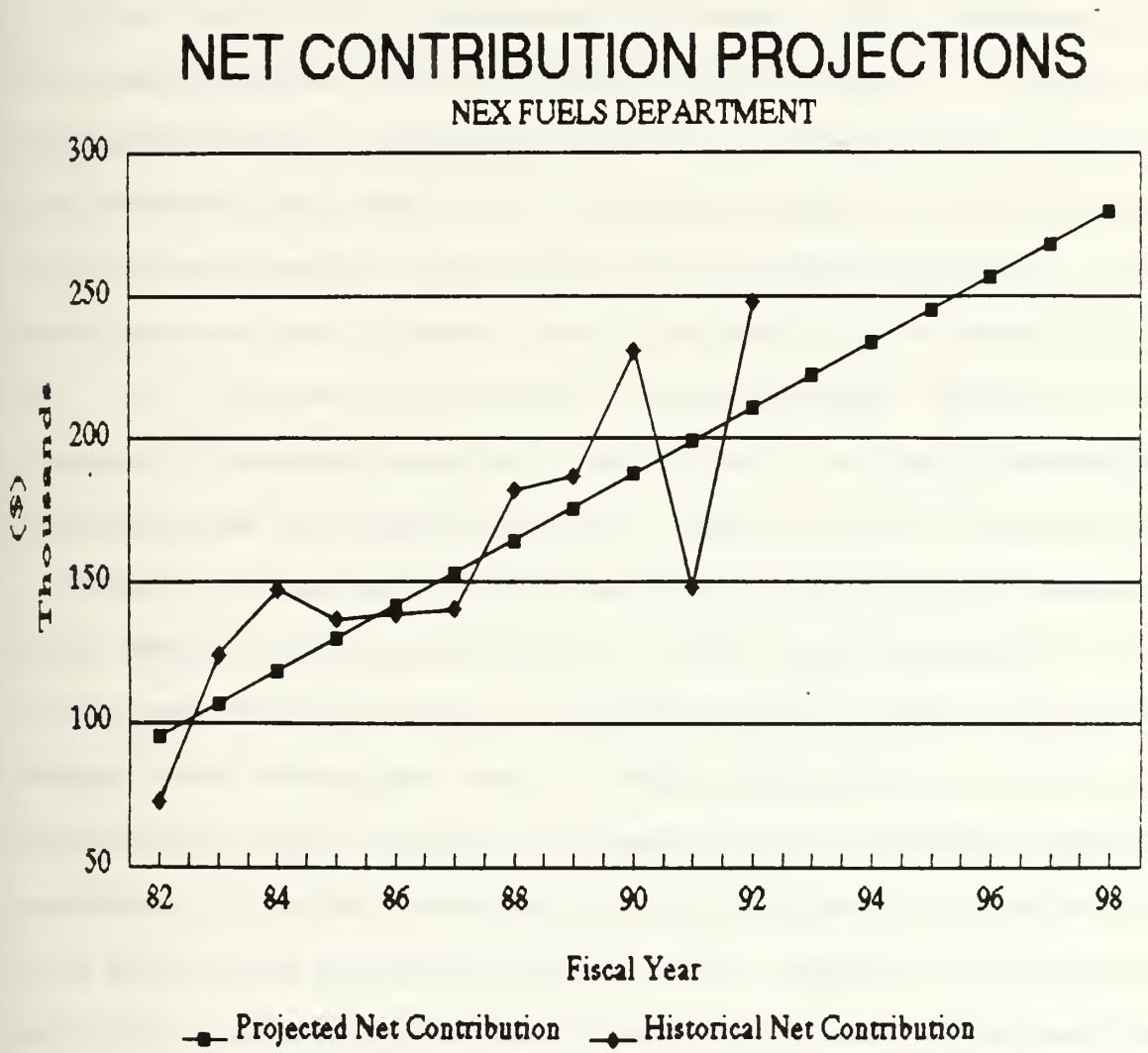
DEPARTMENT J-3, FUELS,
NEX, NPS, MONTEREY, CALIFORNIA

FISCAL YEAR	ACTUAL VALUE ($)	PROJECTED VALUE ($)
1980	72,433	95,607
1981	124,184	107,059
1982	146,500	118,511
1983	136,024	129,963
1984	138,265	141,415
1985	140,037	152,867
1986	182,256	164,319
1987	186,952	175,711
1988	230,619	187,223
1989	147,803	198,675
1990	248,120	210,127
1991	-	221,579
1992	-	233,031
1993	-	244,483
1994	-	255,935
1995	-	267,387
1996	-	278,839

NOTE. Regression Line Equation for Net Contribution:
Y(n) = $95,607 + $11,452(n); n = year, with 1982 = 0.

FIGURE 3

DEPARTMENT J-3, FUELS
NEX, NPS, MONTEREY, CALIFORNIA



The future NEX customer base was examined to consider the impact of anticipated decreases in NPS student populations and Fort Ord downsizing plans. Student population is expected to draw down slowly from 1,800 students to 1,700 over the next two years. Fort Ord's downsizing is not expected to significantly affect the NEX customer base. The Fort Ord gas station is being retained as part of a core group of services that will remain after the Seventh Light Infantry Division is disbanded in FY 1993.[Ref. 16] As a result, the customer base for the NEX should remain relatively constant for the foreseeable future. In the event plans change and the Fort Ord gas station does close, NEX's customer base may actually increase as retirees have fewer retail gasoline options.

Attempts were made to collect fuel sales volumes over the eleven year period reviewed to determine if changes in revenues resulted from sales volume changes or fuel price changes. However, the NEX does not maintain consolidated fuel volume records, and data is not available for more than one to two years in the past. The trucking firm that makes bulk fuel deliveries to the NPS NEX was contacted: however, they were not able to provide information on past deliveries. In July 1992, an unknown NPS student compiled records going back to 1991. Total sales volume for this one year period was 1,431,568 gallons. These values have been rounded to the nearest thousand for this study.

Despite the shortage of comprehensive sales volume data, the NEX gas station is assumed to have a fairly steady annual business volume. This is considered reasonable because of the consistent relationship between the consumer price index for motor fuels and NEX fuel revenues. It is also supported by the steady values for gross profit and net contribution. Finally, the authorized customer base, estimated at 40% active duty and 60% retired personnel, is not subject to drastic shifts from one year to the next.

As the final element in developing forecasts, net contribution projections have been reduced to reflect interrupted revenues during the actual upgrade. Based on the additional losses of $52,000 experienced while the station was closed for two non-consecutive months in FY 1991, additional net contribution losses of $26,000 per closed period have been added for when the station is undergoing upgrading. To determine this amount, the average of FY 1990 and FY 1992 sales ($1,831,200) was used. This corresponds to the behavior of the CPI in FY 1991, which was approximately the average of the CPIs for FY 1990 and FY 1992. For the same two years, an average percent net contribution to sales figure of 13.1% can be calculated. Applying this to the average sales figure results in an estimated FY 1991 net contribution of $239,890. This is the expected amount if station operations had not been interrupted. After adjusting $239,890 proportionately downward to $199,908 to account for two non-consecutive months

of closure, the actual net contribution for FY 1991 of $147,803 was subtracted from it. The resulting value of $52,105 is considered the additional loss encountered to later re-establish the customer base. One half of this value was used to arrive at the $26,000 loss per closure figure.

C. ANALYSIS OF GAS STATION UPGRADE ALTERNATIVES

The four alternatives previously introduced will now be reviewed in detail. Radian Corporation's estimates have been adjusted for inaccuracies and/or changes in circumstances. The largest line item revised in all the alternatives was Radian Corporation's assigned value for tank removals. This line item was increased from $10,200 for the two steel tanks to $82,000. This was based on actual Naval station costs experienced to remove the leaking fiberglass tank [Ref. 17].

Radian Corporation's original present value calculations used a 9% discount interest rate and are shown in Appendix D. A 10% discount rate was used in this study which is required by Department Of Defense (DOD) and Navy cost analysis planning instructions [Refs. 18 & 19]. Costs were discounted to determine their present value for FY 1993. This discount rate is close to current local business conditions. Business equipment loan rates are 8.25 to 8.55% with 1 to 2% loan fees. Inflation effects were ignored in this study.

A payback period has also been calculated for each alternative using the estimated 1993 present value costs and

projected net contributions. Net present value (NPV) over the expected life of the tanks could be calculated using net contribution estimates. However, since revenues are the same for all upgrade alternatives NPV has the same ranking as present value (PV) of costs. The full cost of each alternative is presented for budgeting purposes.

1. **Alternative I - Retrofit Existing USTs**

This alternative upgrades the USTs in 1993 to comply with environmental regulations until they are replaced in 1998. When Radian Corporation completed their study in July 1992, all three of the NEX gas station's USTs were in operation. Very shortly after that, annual tank testing revealed that tank # 348-1 (the 10,000 gallon fiberglass tank) was leaking. The tank was promptly taken out of service; therefore, tanks 348-2 and 3 are the remaining steel tanks to which this alternative has been applied.

A review of Radian Corporation's Alternative I estimate appears to indicate that 1992 costs to complete the work were over discounted. This provided a lower total cost for this alternative than seemed reasonable. This study uses Radian Corporation's tank replacement costs for Alternative II as the basis for Alternative I because of similar work completion timeframes. Additional costs to retrofit the storage tanks in 1993 have been added. The cost for the tank removal and disposal of the remaining two tanks in 1998 has

been revised upward based on actual costs incurred to remove the fiberglass tank in 1993. Total FY 1993 costs for this option following the elimination of the upgrade and removal cost of tank # 348-1 is $221,251. Exhibit 3 summarizes the cost estimates for this alternative.

2. **Alternative II - Replace Existing USTs with New**

Alternative II replaces the existing tanks with three new double walled fiberglass USTs in 1998. The Radian Corporation cost estimate for this alternative has been revised to account for the earlier removal of the leaking 10,000 gallon fiberglass tank, and the replacement of the tanks in 1998 vice 1992. The FY 1993 present value cost estimate is $214,451. Exhibit 4 summarizes the cost estimates for this alternative.

3. **Alternative III - Replacement With Aboveground Storage Tanks**

This alternative replaces the three NEX gas station USTs in 1998 with eight aboveground storage tanks (ASTs). The ASTs have advantages of easy access for inspection, but they also have several drawbacks. Federal Uniform Fire Codes (UFC) limit the size of ASTs used for motor vehicle fuels to a maximum of 6,000 gallons per tank. This is because ASTs present additional fire safety hazards not encountered with USTs. Compared to USTs, ASTS also have greater upkeep and maintenance requirements, require more physical space, and

EXHIBIT 3

ALTERNATIVE I - RETROFIT EXISTING USTs IN 1993, REPLACE USTs IN 1993

REVISED COST ESTIMATE

Unadjusted Radian Corp. Estimate for Alternative II, 1992 Present Value (PV)	$172,042 *	Tanks 1-3.
Less: Tank 1 removal	$ (4,800)	
Tank 2 & 3 removal/clean-up	$(10,200)	
Revised PV 1992	$157,042	
Adjusted to 1993 PV @ 10%	X $(1.09)^6/(1.10)^5$	
	$163,535	

Add ins:

Tanks 2 & 3 removal costs, value in 1993, (remove 1998)	$50,916 **
Cathodic Tank Protection (1993)	$6,800
TOTAL ADD INS, PV 1993	$57,716

ALTERNATIVE I, PV 1993

Adjusted Radian Estimate	$163,535
Add ins	$ 57,716
TOTAL ALTERNATIVE I	$221,251

* Radian Corporation's Alternative II estimate was used as the basis for this revised estimate. Retrofit costs of a cathodic tank protection system have been added into estimate.

** The value for tank removal was derived from costs of $51,000 in May 1993 to remove tank number 1. This amount was increased 1.6 times to cover the simultaneous removal of two tanks based on conversations with the construction contracts office at NPS. $82,000 was then adjusted to PV 1993 costs.

EXHIBIT 4

ALTERNATIVE II - REPLACE EXISTING USTs IN 1998

REVISED COST ESTIMATE

Unadjusted Radian Corp. Estimate, 1992 Present Value (PV)	$172,042	Tanks 1-3.
Less: Tank 1 removal	$ (4,800)	
Tank 2 & 3 removal/clean-up	$(10,200)	
Revised PV 1992	$157,042	
Adjusted to 1993 PV @ 10%	X $(1.09)^6/(1.10)^5$	
	$163,535	
Add in:		
Tanks 2 & 3 removal costs, value in 1993, (remove 1998)	$50,916 *	
TOTAL ADD INS, PV 1993	$50,916	
ALTERNATIVE II, PV 1993		
Adjusted Radian Estimate	$163,535	
Add ins	$ 50,916	
TOTAL ALTERNATIVE II	$214,451	

* The value for tank removal was derived from costs of $51,000 in May 1993 to remove tank number 1. This amount was increased 1.6 times to cover the simultaneous removal of two tanks based on conversations with the construction contracts office at NPS. $82,000 was then adjusted to PV 1993 costs.

pose a greater air pollution hazard. The air pollution hazard is due to ASTs needing a more complicated vapor recovery system than the gravity recovery systems on USTs. Fuel vapors must be pulled back into the tank through a vacuum pump which is subject to mechanical failure.

The AST's 6,000 gallon size limitation also decreases the option's desirability. Eight tanks would be required to match the original station storage capacity of 45,000 gallons. The Radian Corporation estimate is based on replacing the existing three USTs with three smaller ASTs. This would result in a new station storage capacity of 18,000 gallons. For this study, eight ASTs have been included so that all the alternatives have approximately the same storage capacity.

An AST is better suited for rural rather than urban locations. In rural locations, potential damage from an accidental explosion would not threaten as much life and property as an AST in an urban setting. A common cause of accidents with ASTs results from the requirement to use pumps to deliver bulk fuel loads. This is more dangerous than the gravity flow delivery system used to unload transport tankers into USTs. Explosion proof pumps are required to perform AST deliveries; however, pumps that do not comply with the Uniform Fire Codes are often involved in AST fuel delivery accidents. The NEX gas station is located near the main exchange and in

close proximity to Del Monte Avenue. These are serious causes for concern when considering ASTs.

The Radian Corporation's cost estimate for three ASTs was adjusted by deleting the tank removal costs for Tank # 348-1, increasing the removal costs for the remaining two tanks, and adding five additional ASTs. The 1993 present value cost estimate for this alternative is $350,544. A breakdown is provided in Exhibit 5.

4. Alternative IV - Remove the USTs and Close The Station

This alternative was provided in case the net present value calculations were negative or the customer survey responses had been strongly against continued operations. The FY 1993 present value estimate to remove the tanks and associated equipment and close the station in 1998 is $80,916, (see Exhibit 6). Of this amount, $50,916, for tank removals, disposal and soil remediation costs, is common to Alternatives I-III.

5. Alternative Present Value And Payback Comparisons

As previously mentioned, least squares regression analysis was performed to project net contributions. These projections were used for the payback analysis. Net present value (NPV) over the expected life of the tanks could also be calculated using net contribution estimates from the regression. However, this is not necessary because revenues are the same for all upgrade alternatives so NPV has the same

EXHIBIT 5

ALTERNATIVE III - REPLACE EXISTING USTs With ASTs IN 1998

REVISED COST ESTIMATE

Unadjusted Radian Estimate, 1992 Present Value (PV)	$157,185	Tanks 1-3.
Less: Tank 1 & piping removal	$ (5,750)	
Tank 2 & 3 removal/clean-up	$(12,100)	
Revised PV 1992	$139,335	
Adjusted to 1993 PV @ 10%	X $(1.09)^6/(1.10)^5$	
	$145,096	

Add ins:

Tanks 2 & 3 removal costs, PV in 1993, (remove in 1998)	$50,916 *
Cost of five additional ASTs @($49,775/AST in 1993)	$154,532 **
TOTAL ADD INS, PV 1993	$205,448

ALTERNATIVE III, PV 1993

Adjusted Radian Estimate	$145,096
Add ins	$205,448
TOTAL ALTERNATIVE III	$350,544

* The value for tank removal was derived from costs of $51,000 in May 1993 to remove tank number 1. This amount was increased 1.6 times to cover the simultaneous removal of two tanks - based on conversations with the construction contracts office at NPS. $82,000 was then adjusted to PV 1993 costs.

** Five ASTs were added to bring the planned total to eight ASTs. At 6,000 gallons per AST this will match the current design storage capacity of the NEX gas station (45,000 gallons for three USTs).

EXHIBIT 6

ALTERNATIVE IV - REMOVE THE USTs AND CLOSE THE GAS STATION

COST ESTIMATE

Tank Removal Costs	
Tanks 2 & 3 removal costs, Present Value in 1993 (remove in 1998)	$50,916 *
Shutdown Costs	
Remove and salvage pumps, hoses & nozzles. Remove piping and island awnings Present Value in 1993 (remove in 1998)	$30,000 **
TOTAL ALTERNATIVE IV CLOSING COSTS (Present Value 1993)	$80,916

* The value for tank removal was derived from costs of $51,000 in May 1993 to remove tank number 1. This amount was increased 1.6 times to cover the simultaneous removal of two tanks based on conversations with the construction contracts office at NPS. $82,000 was then adjusted to PV 1993 costs.

** Amount includes consideration of some salvage value and sale of useable equipment by the contractor. This reduces total costs to the Government.

ranking as present value (PV) of costs. Also, the short payback periods indicate that NPV is greater than zero over the life of the tanks. Reviews of the work involved shows that all the alternatives would require about the same two month shutdown in 1998. Thus, sales revenues will be the same for Alternatives I-III.

Alternative II - Replace the USTs in 1998, has the lowest 1993 PV ($214,451), with a payback period of 15.5 months. A 1993 Present Value and payback period comparison is provided in Table 10.

D. LOCAL GAS STATION MARKET PRICE SURVEY

The NEX gasoline pricing surveys conducted through FY 1992 reveal that the NEX maintained competitive prices with area civilian service stations. The survey shows that the NEX gas station matched or beat civilian gas station prices on regular unleaded gasoline by 0.1¢ to 9¢ per gallon. The NEX gas station also consistently matched or beat the competition (by up to 9¢ per gallon) on super unleaded gas prices during the same period. Complete market survey information was not maintained and, therefore, not available for the years prior to FY 1992. Market survey data was presented earlier in this study (Tables 4 and 5 in Chapter IV).

TABLE 10

FY 1993 PRESENT VALUES AND PAYBACK OF ALTERNATIVES

DEPARTMENT J-3, FUELS, NEX, NPS, MONTEREY, CALIFORNIA

(DOLLARS)

	ALT. I	ALT. II	ALT. III	ALT. IV
PV 1993	221,251	214,451	350,544	80,916
PAY BACK IN MONTHS	16.0	15.5	24.2	NA

- **Alternative I** - Upgrade existing USTs in 1993 and replace them in 1998 with new USTs.

- **Alternative II** - Replace USTs with new USTs in 1998.

- **Alternative III** - Replace existing USTs with ASTs in 1998.

- **Alternative IV** - Remove USTs and close gas station in 1998.

- Uses 1998 alternative costs, four months of projected net contribution in 1998 (after upgrades are completed in mid year), with $26,000 deducted in losses for re-establishing the customer base after re-opening, and net contribution projections increasing at $11,452 per year from a net contribution in FY 1998 of $278,839.

E. CUSTOMER GAS STATION SURVEY

The customer survey was conducted to answer three questions; 1) How much do customers value the NEX gas station; 2) Is the gas station a business draw for the main NEX retail store; and 3) Are customers aware of and sensitive to fuel prices? Qualitative rather than quantitative answers were sought.

In March 1993, 600 surveys were randomly distributed through the NPS Student Mail Center to a population of 1,800. By the end of April 1993, 189 surveys had been returned (31.7%). The return rate was lower than expected and this may be a source of bias if neutral or apathetic students did not respond. As a result, fewer students may actually favor keeping the station open than indicated by the surveys.

Using the central limit theorem, an assumed normal population of 1,800 students sampled without replacement, and a finite population correction factor, a 95% confidence level was achieved with plus or minus margins of error from 5.4% to 6.8%. The margin of error depended on the number of possible responses per question, which ranged from two to five. A survey form with the number of responses received (frequency) and percentages for each response block is provided in Exhibit 7. All returned questionnaires were fully answered with no missing cases. Survey comments are compiled in Appendix E. Contingency tables have been developed for

EXHIBIT 7

GAS STATION CUSTOMER SURVEY RESULTS

NEX, NPS, MONTEREY, CALIFORNIA

MARCH - APRIL 1993

Numbers in blocks are response frequencies received. Percentages are provided for selected questions.

189 Surveys returned out of 600, (31.5%)

1. I am: Active Duty 165, NPS Student 154, Navy 129, Army 11, USAF 0, USCG 3, Other 6 (USMC 4, Dependents 2).

2. I am: male 167, 88.4% female 22. 11.6%

3. Which type of fuel do you normally buy for your vehicle(s)?
super unleaded 73 35.8% unleaded 120 58.8% regular leaded 11 5.4%

4. Are you aware of gasoline prices in town compared to exchange prices? Yes 140, 74.1% No 19, 10.0% Sometimes 30. 15.9%

5. How often do you (or your spouse) use the Navy Exchange gas station? Almost everytime I fill-up 145, (76.7%) Sometimes (every few months) 26, 13.8% Seldom (1 or 2 times per year) 6, 3.2% Never 12. 6.3%

If respondent answered "Never" to question # 5, they were directed to skip to question # 10.

6. How do you feel about the gasoline quality at the Navy Exchange? Good 87, 49.2% O.K. 58, 32.8% Wary 10, 5.6% Poor 1, 0.6% Don't know 21. 11.8%

EXHIBIT 7 (CONTINUED)

GAS STATION SURVEY RESULTS

7. When you purchase gas on base, how often do you (or your spouse) also shop at the main exchange or outlet stores?
Always 0 (0%), Usually 23 (13.0%), Sometimes 99 (55.9%), Seldom 52 (29.4%), Never 3 (1.7%).

8. The exchange gas station benefit is a right:
Agree 71 (40.1%), Disagree 85 (48.0%), Don't care 21 (11.9%).

9. If the exchange no longer had a gas station, would you (or your spouse) change how frequently you used the main exchange and outlets? No change 112 (63.3%), Would shop less often 65 (37.7%).

10. If the exchange gas station were closed to provide more on base parking (leaving only the mechanics operating) would you

1	2	3	4	5
3	7	23	44	112
Strongly Approve	Approve	Neutral	Disapprove	Strongly Disapprove?
1.6%	3.7%	12.1%	23.3%	59.3%

11. How strong are your feelings towards keeping the exchange gas station open?

1	2	3	4	5
113	48	24	2	2
Strongly Approve	Approve	Neutral	Disapprove	Strongly Disapprove
59.8%	25.3%	12.7%	1.1%	1.1%

12. Optional Comments 84 (44.4%)

selected data to investigate relationships of responses. The main research questions addressed by the survey are discussed in the following paragraphs.

1. **Customer Value of the Gas Station**

Two questions, # 10 and # 11, were directly related to how much customers valued the gas station. Question # 6 was indirectly related to value by asking about the perceived quality of the gasoline. Respondents could conceivably value the service but hold a poor opinion of quality. 145 (76.7%) of the respondents claimed to be frequent users of the station, using it almost everytime they fill-up. The fact that these people are frequent users infers that they value both the product and the service. To investigate this assertion, a contingency table was developed to compare the responses of question # 5 (frequency of station use) to question # 6 (perceived gasoline quality).

Table 11 shows that 125 (86.2%) of the frequent users consider the gasoline quality "good" or "O.K.", and 18 (69.3%) of the respondents who use the gas station "sometimes" felt the gasoline quality was "good" or "O.K.". These survey question results, taken in conjunction with ongoing profitable sales, indicate the gas station is considered a valuable service by the majority of the active duty customer base.

Question # 8 (The exchange gas station benefit is a right) was originally intended to supplement the value issue

TABLE 11

CONTINGENCY TABLE

COMPARISON OF NEX GAS STATION CUSTOMER SURVEY QUESTIONS # 5 TO # 6

5. How often do you (or spouse) use the Navy Exchange gas station?

Question # 6	Almost everytime I fill-up		Sometimes (every few months)		Seldom (1 or 2 times per year)		Totals	
	f	%	f	%	f	%	f	%
Good	80	55.2	7	26.9	0	0	87	49.2
O.K.	45	31.0	11	42.4	2	33.3	58	32.8
Wary	5	3.5	3	11.5	2	33.3	10	5.6
Poor	0	0	1	3.8	0	0	1	0.5
Don't Know	15	10.3	4	15.4	2	33.3	21	11.9
Totals	145	100.0	26	100.0	6	100.0	177	100.0

6. How do you feel about the gasoline quality at the Navy Exchange?

Note: Question # 5 also has a response category for "never" using the NEX gas station. These 12 responses were not included in this table because they do not apply to question # 6.

by measuring how strongly the customers held their views. Based on comments received, the question cannot be used to draw any conclusions. 21 out of 84 total written comments concerned the use of the word "right" versus what most respondents considered the correct term of "privilege." Many who answered "disagree" did so based on the wording of the question rather than on how strongly they valued the gas station.

a. Close the Gas Station for more Parking

Question # 10 asked how respondents would feel "If the exchange gas station were closed to provide more on base parking (leaving only the mechanics operating)...." This question was designed to make the respondents consider opportunity costs. The parking lot was used as an example of an alternative use, but this may have misled some of the respondents. 22 of the 84 written comments concerned parking problems on base. Most were strongly opposed to intentionally replacing the gas station with a parking lot. The comments indicated that these respondents may have believed that parking problems were the central point of the survey. Fortunately, question # 10 was the second to last question in the survey, so previous answers should not have been affected by any shifts in focus that took place.

Summarizing the 189 responses to question # 10, 112 (59.3%) "strongly disapproved," and 44 (23.3%) "disapproved"

of closing the gas station to provide more on base parking. This provides a total approval rating for continued operations of 82.6%. Only ten respondents were negative toward keeping the station open instead of a parking lot; three "strongly approved" and seven "approved" for a total of 5.3%. The remaining 23 respondents were neutral (12.1%).

b. Keep the Gas Station Open

Of the 189 responses to question # 11, "How strong are your feelings towards keeping the exchange gas station open?", 113 (59.8%) "strongly approved," and 48 (25.3%) "approved" of keeping the station open. This provides a total approval rating for continued operations of 85.1%. In contrast, only four respondents were negative about keeping the station open, two "strongly disapproved" and two "disapproved," for a total of 2.2%. The remaining 24 respondents were neutral (12.7%).

c. Gasoline Quality at the NEX

Question # 6, "How do you feel about the gasoline quality at the Navy Exchange?" ties into the value question for the reasons previously stated. Respondents who said they never used the exchange gas station were asked to skip question # 6. Of the 177 responses to this question, 87 (49.2%) said they felt the quality of the gasoline was "good," 58 (32.8%) answered "O.K.," and only 11 (6.2%) felt "wary" or that the gasoline was "poor." The remaining 21 respondents

(11.8%) stated they did not know. A weakness of this question is the assumption that each of the responses provided is on a Likert Scale, equally spaced on the spectrum of choices. This may not be true given the subjective values people place on terms like "good, O.K., wary, and poor."

Overall, the perceived quality of the gasoline is positive. Table 11 shows that 125 (86.2%) of the frequent users consider the gasoline quality "good" or "O.K.", and 18 (69.3%) of the respondents who "sometimes" use the gas station felt the gasoline quality was "good" or "O.K.".

2. **Gas Station Affect on Main NEX Store Sales**

Two questions were designed to provide insight into how often customers who purchased fuel at the NEX also used the main retail store. The store and the service station are co-located on the base. The questions are: # 7, "When you purchase gas on base, how often do you (or your spouse) also shop at the main exchange or outlet stores?," and # 9, "If the exchange no longer had a gas station, would you (or your spouse) change how frequently you used the main exchange and outlets?"

In conjunction with questions # 7 and # 9, question # 5, which considers the frequency of purchases, was reviewed to determine if any one type of customer used the retail store more often than another when purchasing gasoline. If the most frequent gas customers were also the ones who shopped at the

main exchange each time, this would have a greater impact than if those who purchased fuel less often were the ones who usually used the main exchange when purchasing gasoline. Contingency tables were developed to compare responses for relationships.

a. Shopping the Main NEX Store When Purchasing Gasoline

Question # 7 asked "When you purchase gas on base, how often do you (or your spouse) also shop at the main exchange or outlet stores?" A total of 177 responses were received with no answers in the "always" category, 23 (13%) responded "usually," and 99 (55.9%) indicated "sometimes". Table 12 compares these responses to the frequency of gas station usage in question # 5. This reveals that 105 (72.4%) of the 145 respondents who said they "usually" and "sometimes" shopped the main exchange when purchasing gas use the gas station "almost everytime." This provides evidence of a link between the gas station and the main exchange. Because people usually purchase gas more often than they go retail shopping, the gas station may be a draw for the retail store. However, the reverse is also possible.

b. Main NEX Store Shopping Without a Gas Station

Question # 9 also intended to provide feedback on the business draw of the NEX gas station for the main exchange. Question # 9 asked, "If the exchange no longer had

a gas station, would you (or your spouse) change how frequently you used the main exchange and outlets?" This question had two possible responses, "no change" and "would shop less often." The majority stated that closing the NEX gas station would not affect how frequently they used the main store, 112 (63.3%). The remaining respondents, 65 (36.7%), claimed they would shop less often. Question five was again used in conjunction with question # 9 to determine which category of customer responded to each choice (see Table 13). 55 (37.9%) respondents who use the gas station "almost everytime" they fill up indicated they would shop the main store less often. Adding in those who claim to use the station "sometimes" indicates that a total of 64 (37.4%) respondents claim they would use the store less often if the station closed.

Finally, questions # 7 and # 9 are compared in Table 14. This shows how respondents say their shopping patterns would change if the station no longer had a gas station, in comparison to how often they now shop the main store when purchasing gasoline. Results show that the 122 respondents who "usually" and "sometimes" use the main store when purchasing gasoline are almost evenly split on how a closure of the gas station would affect their shopping. 67 (54.9%) respondents of these two groups would not change their shopping pattern, and 55 (45.1%) would shop the retail store less often.

TABLE 12

CONTINGENCY TABLE

COMPARISON OF NEX GAS STATION CUSTOMER SURVEY QUESTIONS # 5 TO # 7

5. How often do you (or spouse) use the Navy Exchange gas station?

Question # 7	Almost everytime I fill-up		Sometimes (every few months)		Seldom (1 or 2 times per year)		Totals	
	f	%	f	%	f	%	f	%
Always	0	0	0	0	0	0	0	0
Usually	21	14.5	2	7.7	0	0	23	13.0
Sometimes	84	57.9	13	50.0	1	16.7	98	55.4
Seldom	39	26.9	10	38.5	4	66.6	53	29.9
Never	1	0.7	1	3.8	1	16.7	3	1.7
Totals	145	100.0	26	100.0	6	100.0	177	100.0

7. When you purchase gas on base, how often do you (or your spouse) also shop at the main exchange or outlet stores?

Note: Question # 5 also has a response category for "never" using the NEX gas station. These 12 responses were not included in this table because they do not apply to question # 7.

TABLE 13

CONTINGENCY TABLE

COMPARISON OF NEX GAS STATION CUSTOMER SURVEY QUESTIONS # 5 TO # 9

5. How often do you (or spouse) use the Navy Exchange gas station?

Question # 9	Almost everytime I fill-up		Sometimes (every few months)		Seldom (1 or 2 times per year)		Totals	
	f	%	f	%	f	%	f	%
No change	90	62.1	17	65.4	5	83.3	112	63.3
Would shop less often	55	37.9	9	34.6	1	16.7	65	36.7
Totals	145	100.0	26	100.0	6	100.0	177	100.0

9. If the exchange no longer had a gas station, would you (or your spouse) change how frequently you used the main exchange and outlets?

Note: Question # 5 also has a response category for "never" using the NEX gas station. These 12 responses were not included in this table because they do not apply to question # 9.

TABLE 14

CONTINGENCY TABLE

COMPARISON OF NEX GAS STATION CUSTOMER SURVEY QUESTIONS # 9 TO # 7

9. If the exchange no longer had a gas station, would you (or your spouse) change how frequently you used the main exchange and outlets?

Question # 7	No Change		Would shop less often		Totals	
	f	%	f	%	f	%
Always	0	0	0	0	0	0
Usually	10	8.9	13	20.0	23	13.0
Sometimes	57	50.9	42	64.6	99	55.9
Seldom	42	37.5	10	15.4	52	29.4
Never	3	2.7	0	0	3	1.7
Totals	112	100.0	65	100.0	177	100.0

7. When you purchase gas on base, how often do you (or your spouse) also shop at the main exchange or outlet stores?

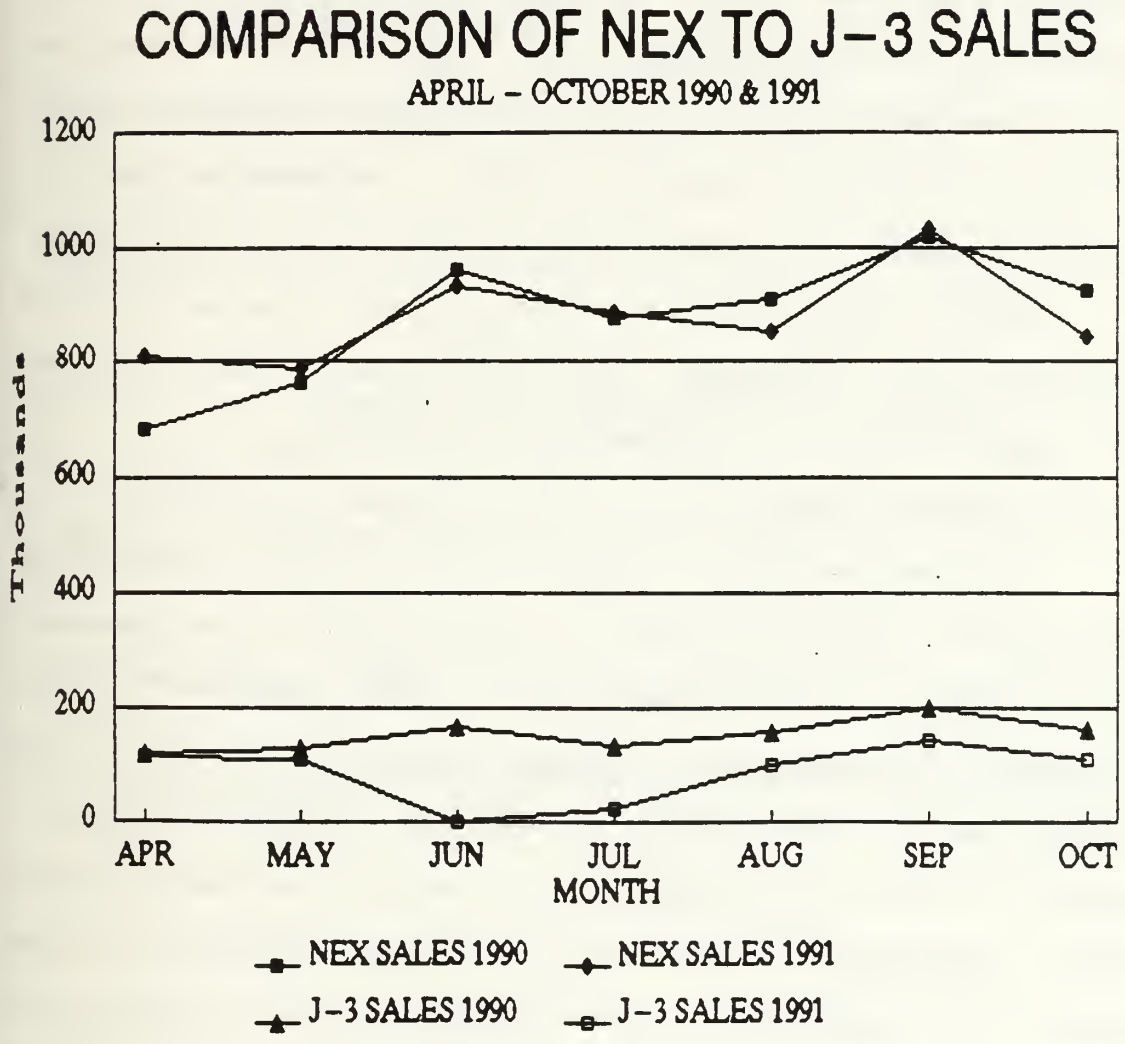
These results indicate that the location of the gas station does increase main exchange shopping sales. This further confirms the apparent link noticed while analyzing question # 7. A closure of the gas station could reduce purchases in the retail store by some of the gas station's steady customers. The potential impact of this has not been quantified for two reasons: (1) the total number of customers using the NEX gas station was not reviewed, and (2) the average dollar purchases at the main exchange by gas station patrons is unknown.

c. Effect of a Temporary Gas Station Closure On Overall NEX Sales

In an effort to further investigate the apparent location relationship revealed in the survey analysis, sales figures for the entire NPS Navy Exchange were reviewed from April 1991 through October 1991. As previously discussed, the NEX gas station was partially closed during the months of July and September. The figures were reviewed to determine if sales for the Navy Exchange had decreased more than the amount of lost NEX gas station sales. The same months were also reviewed in 1990 to see if sales relationships between the entire NEX and Department J-3, Fuels, were significantly different than in 1991. This data is presented graphically in Figure 4. Department J-5, Automotive Shop, sales during the same periods in 1990 and 1991 were also reviewed to see if the

FIGURE 4

TOTAL NEX SALES TO TOTAL FUEL SALES
NPS, MONTEREY, CALIFORNIA



gas station closures adversely impacted automotive shop sales. This data is presented in Figure 5.

Comparisons of the data do not reveal any connection between sales changes in total NEX sales, Department J-5 and Department J-3. The automotive shop had steady sales and does not appear to have been affected by the shut-downs of the gas station in 1991. Information was not available to determine causes of main NEX sales fluctuations.

Taken in the context of the survey, the gas station may provide some business draw to the main store but the relationship is not strong enough to quantify.

3. **Customer Sensitivity to Fuel Prices**

In question # 4, a total of 140 (74.1%) respondents indicated that they were aware of fuel prices in town compared to the exchange. Of the remaining, 19 (10%) answered "no" and 30 (15.9%) said "sometimes." A weakness of the survey was not including a follow-on question to ask if prices govern their decision on where to purchase fuel. Table 15 was developed to compare responses of question # 5 on the frequency of gas station use to question # 4 on whether customers are aware of comparative prices. Of those who use the gas station "almost everytime" they fill-up, 109 (75.2%) are aware of comparative prices in town and on base. Combining this category with those who sometimes use the station, 130 (92.9%) are aware of prices in town.

FIGURE 5

TOTAL FUEL SALES TO AUTOMOTIVE SHOP SALES
NPS, MONTEREY, CALIFORNIA

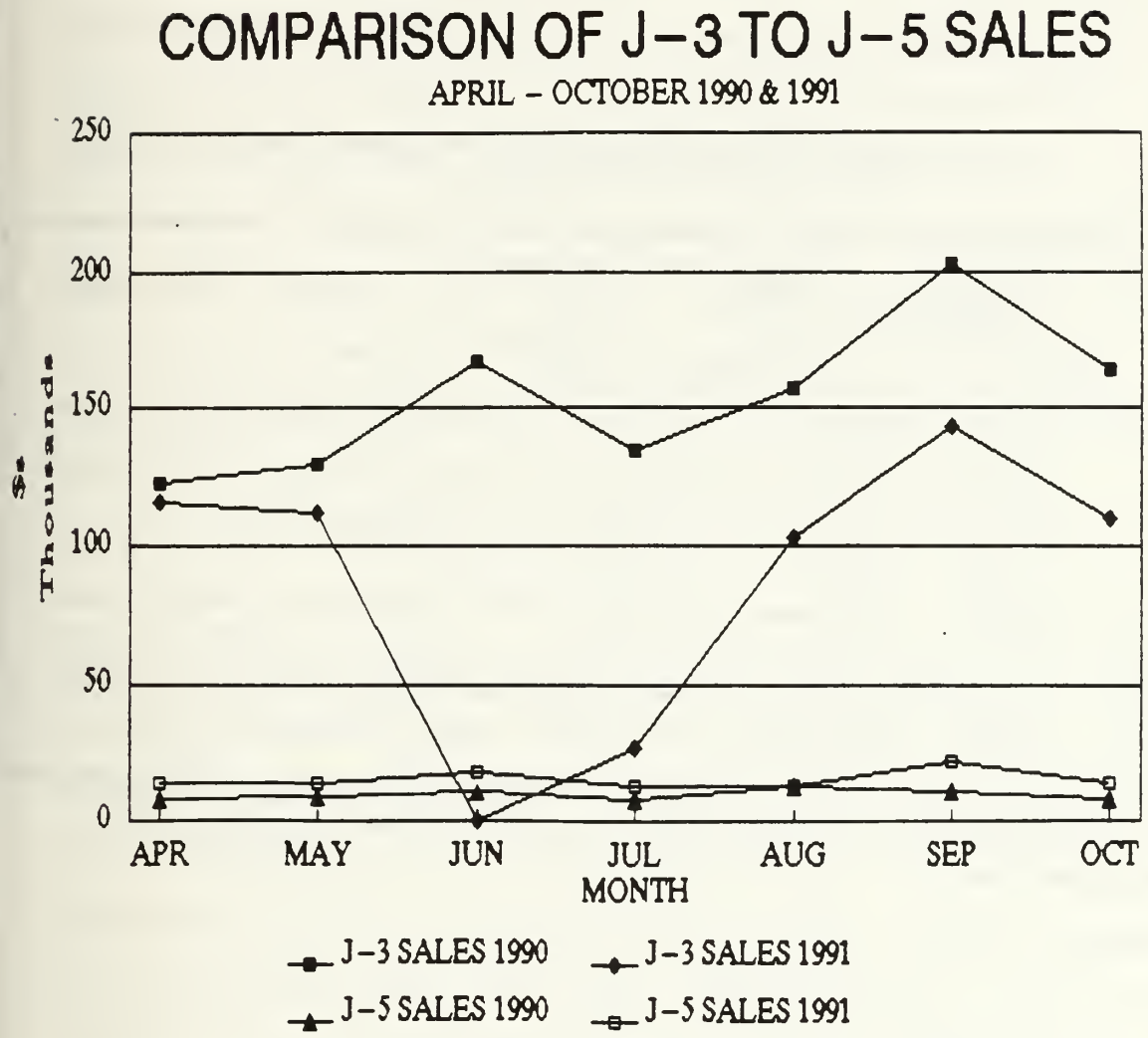


TABLE 15

CONTINGENCY TABLE

COMPARISON OF NEX GAS STATION CUSTOMER SURVEY QUESTIONS # 5 TO # 4

5. How often do you (or spouse) use the Navy Exchange gas station?

Ques. #4	Almost everytime I fill-up		Sometimes (every few months)		Seldom (1 or 2 times per year		Never		Totals	
	f	%	f	%	f	%	f	%	f	%
Yes	109	75.2	21	80.8	5	83.3	5	41.7	140	74.1
No	12	8.2	1	3.8	1	16.7	5	41.7	19	10.0
Some-times	24	16.6	4	15.4	0	0	2	16.6	30	15.9
Totals	145	100	26	100	6	100	12	100	189	100

4. Are you aware of gasoline prices in town compared to exchange prices?

F. VALUE OF SAVINGS RECEIVED FROM SOCIETY

In addition to the main research questions regarding costing practices and upgrade alternatives, rough estimates of consumer savings and tax savings enjoyed by military patrons and the NEX were used to further clarify the value of the fuel service and the cost of providing it. The consumer savings and fuel net contributions measure the total net value of the fuel service. The tax savings measure society's cost to provide this benefit. The intention is to evaluate the cost to society of savings provided to the NEX which are then partially passed along to NEX gas station customers.

The cost exemptions discussed in Chapter IV, Section E, were used as the basis for the tax savings. Actual FY 1992 NEX gas station sales of $1,799,020 were used to determine sales tax breaks. The following assumptions have been made: Consumer demand for fuel is inelastic over the price per gallon ranges involved; the quantity of fuel sold annually has been held constant at 1,066,000 gallons for regular unleaded, and 365,000 gallons for super unleaded (from a July 1991 through July 1992 NPS student study of fuel volume sold); and cost breaks can be allocated as 75% to regular unleaded fuel, and 25% to premium unleaded based on the distribution of quantities sold.

A summary of consumer and tax savings is presented in Exhibit 8.

EXHIBIT 8

NEX GAS STATION CONSUMER AND PRODUCER SURPLUSES PROVIDED BY SOCIETY

ANNUAL ESTIMATED DOLLAR VALUES FY 1992

	CONSUMER SAVINGS			TAX SUBSIDIES	
	Low	High		Low	High
Regular Unleaded	10,660	95,940	Regular Unleaded	435,745	440,995
Premium Unleaded	0	32,850	Premium Unleaded	145,248	146,998
TOTAL	10,660	128,790		580,993	587,993

TOTAL NET SOCIAL VALUE OF NEX FUEL SERVICE

CONSUMER SAVINGS + NET CONTRIBUTION - TAX SUBSIDIES

Low Range $10,660 + $248,120 - $580,993 = - $322,213

High Range $128,790 + $248,120 - $587,993 = - $211,083

Rounded estimate range: - $322,000 to - $211,000 total cost.

NOTES.

- Consumer savings is the total savings provided to NEX gas station customers through lower fuel prices than charged in the civilian market.

- Tax subsidies are the total amount of estimated Federal, state and local taxes and annual fees, insurance premiums, and NPS provided support that the NEX gas station does not pay.

- Cost breaks for tax subsidies have been allocated 75% to regular unleaded and 25% to premium unleaded based on volume. Quantity assumed fixed at 1,066,000 gallons regular and 365,000 gallons of premium unleaded sold from July 1991-1992.

1. **Consumer Savings**

The consumer savings is provided to NEX gas station patrons from the difference between the average civilian fuel prices and the NEX gas station's prices. The price difference per gallon times the number of gallons sold by the NEX gas station equals the total consumer savings.

The market surveys of gasoline prices in the local area were used for estimated price differentials per gallon. For regular unleaded, savings ranged from 0.1¢ to 9.0¢ per gallon. For premium unleaded, savings ranged from 0¢ to 9.0¢ per gallon. These values times the assumed fuel volumes result in a total consumer surplus of from $10,660 to $128,790.

2. **Tax Savings**

The tax savings are the value of the NEX gas station's tax breaks and subsidies that a comparable civilian service station pays to operate. Included in this analysis are: Federal fuel excise tax of 14¢ per gallon; State fuel excise tax of 17¢ per gallon; State sales tax of 7.25%; Annual environmental liability insurance premiums of $5,000; Annual workman's compensation insurance premiums of from $8,000 to $15,000; and NPS base support of $1,000 annually for tank testing and $10,512 of annual depreciation costs for the 1991 vapor recovery upgrade. One time costs for building permits

and the cost of base security and fire protection were not included.

According to Exhibit 8, the NEX fuel service has a negative net social value. While this service is profitable to the NEX, contributes funds to MWR and provides consumer savings, these benefits are outweighed by the tax and other subsidies that the NEX receives. While upgrading the fuel tanks is profitable to the NEX, it does not make sense from society's financial viewpoint.

VI. CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations will now be discussed based on the data analyzed, observations made and knowledge gained during the course of the study. Areas are discussed in the same order as addressed in previous chapters.

A. COSTING PRACTICES OF THE NEX GAS STATION

The costing practices and procedures of the Navy Exchange Gas Station are generally sound. Total revisions of $20,276 were made to the SC05 Cost Report in this study. Cancelling amounts though resulted in only a 4.2% ($3,748) increase to total expenses for FY 1992. This represents a 1.5% decrease in total net contribution. These revisions are not material; however, areas of cost accounting that can be adjusted to provide a more accurate and complete cost picture are discussed in follow-on paragraphs.

1. Internal Costing Practices

Accounting can be made more accurate by including traceable costs of support provided by the Naval Postgraduate School. This includes the annual tank testing costs and the capitalization of projects funded by the Naval station.

NEX gas station managers need to be aware of the tendency to over allocate shared NEX costs to Department J-3 because of its relative profitability. Over allocating costs

to Department J-3 may result in poor future business decisions for either the gas station, or other NEX service outlets.

The payroll costs of the service station supervisor should be redistributed to reflect actual effort expended between the gas station, auto mechanics and the automotive parts store. Miscellaneous expenses, such as waste oil disposal costs incurred by the auto mechanic operations, Department J-5, need to be separated from gas station operations.

B. GAS STATION UPGRADE ALTERNATIVES

Alternative II, Replace the USTs in 1998, is the most cost effective alternative. Its 1993 present value of costs is $245,535. Payback for this alternative is estimated at 17.5 months. This also considers the impact of the time required to rebuild sales volume after re-opening.

Replacing the three USTs in 1993 was dismissed because of the satisfactory operating condition of the station and the realistic time frames needed to plan, develop, and arrange funding for Navy projects. The current gas station arrangement will also allow the NEX to get the maximum use out of their existing assets before the environmental laws require the 1998 tank upgrade.

Alternative III, replace the USTs with ASTs in 1998, was cost prohibitive with 1993 present value costs of $475,971. Even if the aboveground storage tank option had the lowest

present value cost of the alternatives, it would not be recommended. This alternative is considered too risky to implement onboard NPS. The location and concentration of personnel in the area around the NEX gas station are not compatible with the fire and explosion risks associated with ASTs. In addition to air pollution from gasoline vapors and fire safety concerns, physical space constraints would also make this option difficult to implement.

C. GAS STATION CUSTOMER SURVEY

The survey provided answers to the three questions investigated: 1) How much do customers value the availability of fuel on base; 2) Is the current location of the gas station a business draw for the main NEX retail store; and 3) Are customers aware of and sensitive to fuel prices?

A 95% confidence level with margins of error plus or minus 6.8% was determined for the survey results. Conclusions for each main survey question follow.

1. Customer Value of Gas Station

Respondents were overwhelmingly in favor of keeping the service station in operation. Over 80% of the responses were in favor of continued availability of fuel on base. The NEX gas station's positive net contributions are another indication that customers value the service or they would not be patronizing the station.

2. Gas Station Location Effect on Main NEX Store Sales

According to respondents, the co-location of the main exchange and the gas station appears to increase main exchange shopping sales (and conversely gas station sales). However, this relationship could not be confirmed through a review of NEX sales, gas station sales and automotive shop sales during 1991 shut downs of the gas station. A quantitative value could not be assigned from the results of this study. The total number of customers using the NEX gas station was not collected from gasoline sales receipts, and the average main exchange purchase amount by gas station patrons is unknown.

Qualitative results indicate 72% of the customers who use the gas station almost everytime they fill-up use the main exchange store at the same time either "usually" or "sometimes." Approximately one half of the steady users of the NEX gas station said they would shop in the main exchange less if the station was closed.

3. Customer Sensitivity to Fuel Prices

Survey responses, in conjunction with the results of the local market surveys of gasoline prices at civilian service stations, indicate that NEX gas station customers are aware of price savings afforded by the NEX. They most likely are behaving in a price sensitive manner. Of those who use the NEX gas station "almost everytime" they fill-up, over 70% are aware of comparative prices in the local area.

D. COSTS OF SAVINGS PROVIDED TO THE NEX GAS STATION

The cursory analysis done in this study seems to indicate that the cost to society of savings provided to the NEX gas station outweigh the benefit provided by the NEX gas station. From a purely financial viewpoint, it does not make sense for society to provide these savings through tax and insurance breaks. Rough estimates of the annual net social value of the NEX fuel service are from a negative $211,000 to a negative $322,000.

These results may indicate that the NEX gas station is not run as cost efficiently as a comparably sized civilian gas station. The NEX station may be profitable only because of the large profit margins resulting from the subsidies. This is not a surprising conclusion for a subsidized operation. It is also not at odds with the intent of Congress when it authorized the establishment of the NEX system in 1946. The NEX gas station does meet their charter by providing service members with a product of comparable value to what is available in the civilian sector, and it does so without excessively competing with the civilian market.

E. FURTHER RECOMMENDATIONS

Recommendations in this section are based on problems encountered and observations made in the course of this study.

1. Recommended Changes to Current NEX Practices

a. NEX Record Keeping

The NEX office does not maintain comprehensive sales volume records on gasoline sold beyond what is needed to maintain current inventory records. Handwritten records exist for the current fiscal year, but no distinction is made between regular unleaded and premium unleaded gasoline volumes.

There is currently not a way to determine the actual relationship of past sales dollar amounts to past sales volumes. Attempts to obtain delivery records from the fuel delivery trucking firm were unsuccessful for past year sales volumes. This limits the ability to determine if changes in total sales dollars result from changes in volume sold or from price adjustments. The consumer price index for motor fuels had to be used to analyze past sales dollar levels.

The NEX should begin collecting and compiling monthly sales quantities of each fuel grade sold and their average price per gallon on one consolidated monthly report. Over time, these figures would aid NEX managers in budgeting more accurate sales and gross profit figures. In addition, a history of volume figures would aid in planning future fuel storage upgrades coinciding with the size of the operation.

b. Gasoline Market Surveys

Monthly gasoline market surveys are kept on hand for the current fiscal year, and then the records are moved into storage. However, when an attempt was made to find prior fiscal year's records, only partial records could be found. The surveys are the only known historical source of the sales price per gallon charged for regular unleaded and premium unleaded gasoline. Financial reports do not distinguish between types of fuel in total sales and cost of goods sold. As a result, no analyses of past price changes and their effect on sales volumes can be made at the local level.

The NEX should maintain on hand at least the past four fiscal year's monthly gasoline price data from their market survey forms. This data would be most useful if consolidated with the sales volume figures discussed on the preceding page.

2. Further Research Questions

a. Society's Cost of Subsidizing NEX Gas Stations

The previous section on the loss to society from subsidies provided to the NEX gas station could easily be expanded into thesis level research through a detailed analysis. The dead weight loss to society for the subsidies could be determined by constructing a demand curve that is elastic, instead of the inelastic one assumed in this study. Subsidy values could be further refined and expanded to

include all NEX gas stations. The main research question would be to determine the total dead weight loss to society of subsidizing exchange service stations.

b. Upgrade Funding Source

The question of which Naval activity should fund NEX gas station upgrades was beyond the scope of this study. However, this issue is a point of contention between many Navy Exchanges and station Public Works Departments. The exchanges believe that it is in the base's best interest to provide capital improvement support at no cost to the NEX system. This increases the NEX's ability to contribute MWR funds. Most Public Works Departments are opposed to using limited station funding, sized for existing base facilities, for NEX facilities. NEX facilities are normally not part of station owned property. The arguments presented by both sides could be collected and reviewed for validity. Based on this research, a resulting recommendation could be issued.

c. Siting of the NEX Gas Station

The current location of the NPS NEX gas station is poor from an environmental standpoint. The close proximity to the shores of Del Monte Lake and the high groundwater in the area (six to eight feet below the ground surface) provides strong potential for groundwater pollution and a quick migration of any potential fuel spill into the lake.

In light of the upcoming requirement to replace all NEX gas Station USTs, a study could be conducted to review possible new locations for the gas station. The study should include a market study of customers, site environmental and access studies, construction estimates, etc.

d. Gasoline Product Lines

The NPS NEX gas station does not carry a mid-grade unleaded fuel. Almost all comparable civilian service stations offer three grades of gasoline products: regular unleaded, mid-grade unleaded and super unleaded. A study could be conducted to determine if the addition of this product line would increase the existing customer base enough to make the action profitable.

F. SUMMARY

This study has answered the research questions initially presented. Navy Exchange costing practices at NPS are sound, and with some minor adjustments, an even higher accuracy of record keeping could be attained.

In light of environmental compliance concerns, Alternative II, replacing the underground storage tanks with new ones in 1998, is the best of the three options considered. Present value 1993 costs of this alternative is $214,451 and the estimated payback is 15.5 months.

The NPS NEX gas station provides a service valued by enough of its potential customer base to make it profitable.

However, a cursory look at the tax subsidies provided to the NEX gas station, by virtue of its status as a federal facility, indicate that cost savings measures should be reviewed in an attempt to cut operating costs and further capitalize on the benefits provided. While no one area has been singled out, total expenses appear higher than what a comparable civilian gas station forced to exist in the market would experience.

The NEX gas station meets the mandates of the Congress and conforms to the policies and procedures of the Navy Exchange system. Continued operations and pursuit of the required 1998 facility upgrade are justified based on the criteria used to evaluate the operation.

LIST OF REFERENCES

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10. Invitation For Bid (IFB) N62474-93-M-2138, ***Remove Damaged Fiberglass Storage Tank, Navy Exchange Service Station, Monterey, CA***, March 1993.

11. Interview between LT R. Carr, Resident Officer in Charge of Construction, Naval Postgraduate School, Monterey, CA, and the author, 24 March 1993.

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13. Contract N62474-92-M-2969, ***Underground Tank Testing at the Naval Postgraduate School, Monterey, CA,*** awarded to Associates Environmental Systems, Inc. for $3,080.00, May 1992.

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APPENDIX A. ENVIRONMENTAL REGULATIONS

COMPILED FROM RADIAN CORPORATION
RETROFIT STUDY OF UNDERGROUND STORAGE
TANKS AT THE NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA

JULY 1992

Table 4-1

Summary of Relevant Federal and California New Underground Storage Tank Construction and Monitoring Standards

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.20(a) CCR Article 3 Section 2631	All new tanks and piping shall be required to have primary and secondary levels of containment	Effective July 1, 1991 for tanks and January 1, 1992 for piping. Exterior of tank shall be marked, code stamped, or labeled with system specifications. A primary containment system shall have wear plates below all accessible openings. Secondary containment for multiple primary containers shall be large enough to contain 150% of the volume of the largest primary container. If secondary containment is open to rainfall, it shall accommodate volume of precipitation during a 24-hour, 25-year storm. Secondary containment systems utilizing membrane liners shall be certified by an independent testing organization and be installed under the direct supervision of a representative of the fabricator or certified contractor. All tanks shall provide 100% secondary containment unless equipped with the overfill protection system.	UST notification form to local agency (within 30 days). Certificate of Compliance for cathodic protection; cathodic protection analysis required if cathodic protection not used.

Table 4-1

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.43(g) and 280.44 (a & c) CCR Article 3 Section 2632	Monitoring requirements, initial responses, and response plan	Exterior surfaces of the underground storage tanks and directly beneath the tank shall be capable of being monitored by direct viewing or by a continuous monitoring system. Visual inspections shall be performed daily, except on weekends and holidays. Liquid level shall be recorded at each inspection. If liquid is observed during inspection, liquid shall be tested, conduct appropriate integrity test. If leak is confirmed, empty tank and secondary containment. Interstitial space of the tank and the secondary containment system shall be monitored continuously, with a monitoring system connected to an audible and visual alarm system. Automatic line leak detectors shall be installed on underground pressurized piping and capable of detecting a 3-gallon/hour leak at 10 psi. A written routine monitoring program shall establish the frequency of monitoring, methods and equipment used, location, name and title of personnel, reporting format, preventive maintenance schedule, and training program description.	

Table 4-1

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.43(g) and 280.44 (a & c) CCR Article 3 Section 2632 (Continued)		Response plan shall demonstrate that any unauthorized release will be removed from secondary containment. Response plan shall include description of methods and equipment used for removing and disposing of hazardous substances, location and availability of equipment, equipment maintenance schedule, and name and title of personnel	
40 CFR 280.20 (a) CCR Article 3 Section 2633	Alternate construction requirements for new motor vehicle fuel underground storage tanks	Underground storage tanks shall be composed of fiberglass reinforced plastic, cathodically protected steel, or steel clad with fiberglass reinforced plastic. Owner of tank shall demonstrate leak interception and detection system can detect a release before it can escape from containment. Floor of any leak interception and detection system shall be constructed on a firm base sloped to a collection sump. Access casing shall be installed in the collection sump of any secondary containment system with backfill in the interstitial space. Leak interception and detection system shall prevent the contact of any leaked hazardous substance with groundwater.	UST notification to local agency (within 30 days). Certificate of Compliance for cathodic protection; cathodic protection analysis required if cathodic protection not used.

Table 4-1

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.41 CCR Articles 3 & 4 Sections 2634 and 2646	Monitoring and response plan standards for new motor vehicle fuel underground storage tanks	After January 1, 1993, inventory reconciliation and other leak detection method that utilizes manual stick readings shall not be used where groundwater is less than 20 feet below the bottom of the tank. Manual stick readings shall not be used after December 22, 1998. Meters used for inputs and withdrawals shall comply with CCR, Title 4, Chapter 9, Subchapter 1. Quantity measurements shall be based on liquid level measurements which are performed during periods of no additions or withdrawals, performed by trained personnel, determined by equipment capable of measuring to the full range of tank's height and to the nearest one-eighth of an inch, measured at the center of the longitudinal axis of the tank, and volume measurements on a calibration chart. Monthly variations exceeding 1% of the monthly tank delivery plus 130 gallons must be investigated. The owner shall, on an annual basis, submit a statement to the local agency which states all inventory reconciliation data. The owner shall notify local agency of a suspected unauthorized release within 24 hours. A written routine procedure shall be prepared and specify methods for determining possible unauthorized releases. A response plan for an unauthorized release shall be developed prior to the tank system being put into service.	

Table 4-1

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.20 (d), 280.30, 280.31, and 280.41 (b) CCR Article 3 Section 2635	Installation and testing requirements for new underground storage tanks and piping	All tanks shall be tested at the factory before being transported. Outer surface of tanks and piping constructed of steel shall be protected from corrosion by cathodic protection or a protective coating or cladding. Before and after installation, all tanks and piping shall be tested for tightness. All secondary containment systems shall pass a post-installation test. All tanks subject to flotation shall be anchored. A secondary containment system is not required for vapor recovery piping, vent piping, or tank riser piping provided the primary containment system is equipped with an overfill prevention system. Secondary containment is not required for suction piping if it operates at less than atmospheric pressure, is sloped toward tank, or no valves or pumps are installed in the line. All underground storage tanks shall be equipped with a spill container and an overfill prevention system. Secondary containment system shall include leak interception and detection systems. Owners shall certify that the installer has been trained and certified by the state license board and tank and piping manufacturers.	Maintain cathodic protection test results of last 3 inspections. Certification of Compliance for installation.

Table 4-1

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.20 (d), 280.30, 280.31, and 280.41 (b) CCR Article 3 Section 2635 (Continued)		The tank, primary piping, and any secondary containment systems were installed according to applicable voluntary consensus standards and any manufacturer's instructions. Installation has been inspected and approved by the local agency or certified professional engineer with tank experience.	

CCR - California Code of Regulations
CFR - Code of Federal Regulations
NOTE: Many sections of the CCR, Title 23 Underground Storage Tank Regulations adopt and reference 40 CFR 280.

RADIAN CORPORATION

Table 4-2

Summary of Relevant Federal and California Existing Underground Storage Tank Monitoring Standards

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.41 (a) CCR Article 4 Section 2641	Monitoring program requirements	Owners of existing tanks shall implement a monthly monitoring program which is capable of detecting any unauthorized release. Underground piping shall be exempt from the monitoring program if the local agency determines that the piping operates at less than atmospheric pressure, is sloped toward the tank, and no valves or pumps are installed in the piping. Tank systems shall be exempt from visual monitoring if a portion of the tank is not accessible for direct viewing, visual inspection would be hazardous, or the tank is at a facility not staffed on a daily basis. All tank systems exempt from visual monitoring shall include non-visual monitoring. The monitoring program must be approved by the local agency. Equipment and devices used in the monitoring program shall be installed, calibrated, operated, and maintained in accordance with manufacturer's instructions. When an unauthorized release is indicated during the installation of a release detection system, the installation operation shall cease. When an unauthorized release may have occurred, the owner shall replace, repair, or close the tank.	Submit monitoring program plan to local agency.

Table 4-2
(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.41(a), CCR Article 4 Section 2642	Visual monitoring	All visible exterior surfaces of the tank and any visible horizontal surface beneath the tank shall be inspected daily. A written statement of the routine monitoring program and the record of the inspections shall be available at the facility. Written records shall be maintained and shall include recordation of the liquid level in the tank. If any liquid is observed around or beneath the tank, the liquid shall be analyzed in the field or laboratory and the tank shall be tested.	Maintain written records.

Table 4-2
(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.40, 280.41 (a), 280.43 (c & d), and 280.44 (a) CCR Article 4 Section 2643	Non-visual monitoring/ quantitative release detection methods	Tank monitoring shall be conducted monthly and be capable of detecting a release of 0.2 gallon per hour; or annually and be capable of detecting a release of 0.1 gallon per hour. Piping monitoring shall be conducted hourly and be capable of detecting a release of three gallons per hour; and monthly and capable of detecting a release of 0.2 gallon per hour; or annually and capable of detecting a release of 0.1 gallon per hour. Any piping systems operating at less than atmospheric pressure shall be monitored every three years and be capable of detecting a release of 0.1 gallon per hour. Each quantitative release detection method, with the exception of inventory reconciliation and manual tank gauging, shall have a performance standard certification. The tank owner shall notify the local agency 48 hours prior to conducting any tank integrity test. If an automatic tank gauge is used as a method of release detection, the automatic tank gauge shall generate a hard copy of all data.	Hard copy record generated and kept for one year. Submit performance claims and how determined; maintain records for 5 years. Maintain documentation of servicing for 1 year. Maintain manufacturers schedules of required servicing for 5 years. Maintain results for 1 year. Report to local agency.

Table 4-2
(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.40 and 280.43 CCR Article 4 Section 2644	Non-visual monitoring/ qualitative release detection methods	Vadose zone monitoring. See Section 2647. Groundwater monitoring. See Section 2648.	Submit performance claims and how determined; maintain records for 5 years. Maintain documentation of servicing for 1 year. Maintain manufacturers schedules of required servicing for 5 years. Maintain results for 1 year. Report to local agency.
40 CFR 280.41 (a) and 280.43 (a & b) CCR Article 4 Section 2645	Manual tank gauging and testing	Used as part of non-visual monitoring for tanks with capacities less than 2,000 gallons. Shall not be used on tanks with secondary containment. Owners who utilize manual tank gauging shall conduct weekly gauging for 36 continuous hours.	

Table 4-2
(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.41 (a) CCR Article 4 Section 2646	Inventory Reconciliation	After January 1, 1993, inventory reconciliation and other leak detection methods that utilize manual stick readings shall not be used where groundwater is less than 20 feet below the bottom of the tank. Manual stick readings shall not be used after December 22, 1998. Tanks shall be monitored individually using an inventory reconciliation system that takes into account separate daily measurements for hazardous substance and water layer, daily input and withdrawal readings, and checking of product inputs indicated by delivery receipt by measurement of the tank inventory volume before and after delivery. Meters used for inputs and withdrawals shall comply with CCR, Title 4, Chapter 9, Subchapter 1. Quantity measurements shall be based on liquid level measurements which are performed during periods of no additions or withdrawals, performed by trained personnel, determined by equipment capable of measuring to the full range of tank's height and to the nearest one-eighth of an inch, measured at the center of the longitudinal axis of the tank, and volume measurements based on a calibration chart. Monthly variations exceeding 1% of the monthly tank delivery plus 130 gallons must be investigated. The owner shall, on an annual basis, submit a statement to the local agency which states all inventory reconciliation data. The owner shall notify local agency of a suspected unauthorized release within 24 hours. A written routine procedure shall be prepared and specify methods for determining possible unauthorized releases.	Written routine procedures shall be prepared.

Table 4-2
(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.43 (e) and 280.44 (c) CCR Article 4 Section 2647	Vadose zone monitoring requirements	Vapor monitoring, soil-pore liquid monitoring, or a combination may be used. Vadose zone monitoring shall not be the sole release detection method. Vadose zone vapor monitoring shall be conducted continuously. Monitoring points shall be located within the excavation backfill and locations will be approved by the local agency.	Locations approved by local agency.
40 CFR 280.43 (f) and 280.44 (c) CCR Article 4 Section 2648	Groundwater monitoring requirements	Groundwater monitoring may be used with other release detection methods or as the sole release detection method where substance stored is immiscible with water, has a specific gravity of less than one, at least one-eighth of an inch of free product can be detected with monitoring devices, groundwater level is less than 20 feet deep, hydraulic conductivity of soil is at least 0.01 cm/sec, groundwater has no beneficial use, and wells are located within the tank excavation zone. Minimum well requirements include 2 wells for single tank, 3 wells for 2 or 3 tanks, and 4 wells (2 downgradient) for 4 or more tanks. Wells for pipelines will be determined by the local agency. Groundwater monitoring shall be conducted continuously or at least monthly.	

Table 4-2
(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.43 CCR Article 4 Section 2649	Well construction and sampling requirements	All wells and borings shall be logged for soil type according to the USCS with all wet zones logged. Soil samples shall be collected from all borings unless the local agency waives this requirement. All tools and equipment shall be steam cleaned and samples of well supplies retained for 90 days. If evidence of contamination is detected, drilling shall be halted. The highest anticipated water levels shall be determined by existing data or one downgradient boring. All wells shall extend 20 feet below the water table and 15 feet below the bottom of the tank but shall not penetrate impermeable zones thicker than 5 feet. Screens will extend 5 feet above the water table. All wells will have bottom caps, filter packs, seals, and well head security. Wells will be developed 72 or more hours following construction. Vadose zone wells will follow the same construction standards as a groundwater well, but will be above any free water zones and at least 5 feet below the bottom of the tank. Qualitative release detection methods shall include consistent sampling and analytical procedures and be included in the permit records.	Records of qualitative release detection methods are included in permit records.

CCR - California Code of Regulations
CFR - Code of Federal Regulations
NOTE: Many sections of the CCR, Title 23 Underground Storage Tank Regulations adopt and reference 40 CFR 280.

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Table 4-3

Summary of Relevant Federal and California Undergound Storage Tank Upgrade Requirements

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.21 (b) CCR Article 6 Section 2662	Underground Storage Tank Upgrade Requirements	All tanks shall be retrofitted with secondary containment before December 22, 1998. Owners of steel tanks shall retrofit those tanks with secondary containment or provide interior lining and exterior cathodic protection by December 22, 1998. The interior lining (coating) shall be applied in accordance with nationally recognized engineering practices. The lining shall be inspected by a coatings expert within 10 years of lining and every 5 years thereafter. All cathodic protection wells must be constructed in accordance with applicable state and local well regulations. Field-installed cathodic protection systems shall be designed and certified as adequate by a corrosion specialist. The cathodic protection systems shall be tested under the direction of a cathodic protection tester within 6 months of installation and at least every 3 years thereafter. Impressed current cathodic protection systems shall also be inspected not less than every 60 calendar days by a cathodic protection tester. Tanks protected with glass fiber reinforced plastic coatings, composites, or equivalent non-metallic exterior coatings or coverings including coating/sacrificial anode systems, shall be tested using an electric resistance holiday detector and shall be checked every 3 years.	

Table 4-3

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.21 (d) CCR Article 6 Section 2663	Spill and Overfill Prevention Equipment Upgrade Requirements	All tank systems shall have an overfill prevention system on or before December 22, 1998. The owner must prevent releases due to spilling or overfilling. The owner must ensure that the volume in the tank is greater than the volume of product to be transferred to the tank before the transfer is made.	
40 CFR 280.21 (c) CCR Article 6 Section 2664	Underground Pressurized Piping Upgrade Requirements	All underground pressurized piping not containing motor vehicle fuel shall be retrofitted with secondary containment by December 22, 1998. All underground pressurized piping containing motor vehicle fuel installed on or before January 1, 1984 shall be retrofitted with secondary containment unless the piping is constructed of fiberglass reinforced plastic, cathodically protected steel, or other corrosion resistant materials no later than December 22, 1998. All underground pressurized piping shall be equipped with automatic line leak detectors no later than December 22, 1990. All underground pressurized piping and secondary containment shall be tested for tightness annually.	

CCR - California Code of Regulations
CFR - Code of Federal Regulations
NOTE: Many sections of the CCR, Title 23 Underground Storage Tank Regulations adopt and reference 40 CFR 280.

Table 4-4

Summary of Relevant Federal and California Underground Storage Tank Permanent Closure Requirements

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.71 CCR Article 7 Section 2672(b)	Permanent Closure Requirements	All residual liquids, solids, or sludges shall be removed and handled as a hazardous waste or recyclable material. The tank shall be inerted to levels that shall preclude explosion or lower levels required by local agency. Proper disposal of the tank shall be documented to the local agency. For tanks destined for a specific reuse shall advise the local agency of name of the new owner, location of use, and nature of use.	Notify local agency of tank reuse. Closure report to local agency.
40 CFR 280.71 CCR Article 7 Section 2672(c)	Permanent Closure Requirements (In-Place)	All residual liquids, solids, or sludges shall be removed and handled as a hazardous waste or recyclable material. All piping associated with the tank shall be removed. For removal which might damage structures or other pipes in a common trench, the piping shall be emptied and capped. The tank shall be filled with an inert solid.	
40 CFR 280.71 CCR Article 7 Section 2672(d)	Permanent Closure Requirements (Sampling)	The owner of a tank being closed shall demonstrate to the local agency that no unauthorized release has occurred and shall be based on soil and/or water analysis. Soil samples shall be taken immediately beneath the removal portions of the tank, a minimum of 2 feet into native material at each end of the tank. A separate sample shall be taken for each 20 lineal feet of trench for piping.	

Table 4-4

(Continued)

Regulatory Citation	Regulatory Standards	Compliance Requirements	Reporting/Record Keeping
40 CFR 280/California Underground Storage Tank Regulations (CCR, Title 23)			
40 CFR 280.71 CCR Article 7 Section 2672(d) Continued	Permanent Closure Requirements (Sampling) Continued	If the tank is not removed, at least one boring shall be drilled as close to the tank midpoint as possible utilizing a slant boring or vertical borings drilled on each long dimensional side of the tank. Samples will be collected a minimum of every 5 feet. If the depth to groundwater is less than 20 feet below ground surface then a well shall be installed adjacent to the tank in the verified downgradient direction. Soil and/or water samples shall be analyzed for all constituents and their breakdown or transformation products previously stored in the tank. If sampling has detected an unauthorized release, the owner shall notify the local agency within 24 hours.	Notify local agency in 24 hours if release detected.

APPENDIX B. SCO5 FINANCIAL REPORTS

NAVY EXCHANGE, DEPARTMENT J-3, FUELS,

NAVAL POSTGRADUATE SCHOOL,

MONTEREY, CALIFORNIA

FY 1988 - 1992

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPARTMENTAL OPERATIONS

SC05 — FOR: NLEACT MONTEREY CA — EXCHANGE NO: 120180 — PERIOD ENDING: 29 JAN 89 — C05

DEPT		INVENTORY AT COST		SALES	GROSS PROFIT		PAYROLL		EMPLOYEE BENEFITS		OTHER DIRECT EXP		EQUIP DEPRECIATION		NET DEPTL CONTRIB		NO OF E... EQUIV MAN MO	AVG $ SALES PER MAN MO
		B O M	E O M	AMOUNT	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS		
J1	BUDGET			110000	109000	991	81100	736			1250	23	10	1	2540	231		
	ACTUAL	570	1006	13784	13595	986	10354	751	1938	141	226	16	1		1074	78	54	2552
	ACT LY	128	238	11980	12018	1003	7841	655	1902	159	78	7	2		2193	183	26	3327
	BUD YTD			175200	173200	989	126000	719			3000	17	120	1	42080	240		
	ACT YTD			178784	174160	974	100215	561	23079	129	2670	15	16		48179	269	667	2680
	LY YTD			167689	160667	994	97428	581	21951	131	2491	15	18		40778	287	629	2665
J3	BUDGET			9400	9700	606	4400	488			300	22	150	19	850	90		
	ACTUAL	2210	3803	7590	7790	1026	4200	553	909	120	377	50	5	1	2297	303	26	2919
	ACT LY	3639	3551	8219	8037	808	4408	536	1091	133	275	33	5	1	857	104	28	2935
	BUD YTD			114800	100500	877	76900	671			3600	31	1380	12	18620	162		
	ACT YTD			100073	88956	889	50771	507	12212	122	3218	32	60	1	22892	227	318	3146
	LY YTD			108963	99579	931	56822	531	13850	129	3660	34	80	1	25165	235	354	3021
J5	BUDGET			70000	10220	146	3030	43			500	17	500	17	6190	88		
	ACTUAL	19807	8790	97869	13822	141	3856	40	882	10	406	4	49	1	8627	94	24	38195
	ACT LY	13776	11048	98311	26435	269	2495	25	597	6	442	5	130	1	22769	232	24	40962
	BUD YTD			1254800	183120	146	53920	43			6400	5	5280	4	117520	94		
	ACT YTD			1270367	260509	190	51468	38	12276	9	13443	10	1065	1	182256	133	314	43642
	LY YTD			1271453	208371	164	45355	36	9839	8	8714	7	4423	3	140037	110	355	35815
J5	BUDGET			7000	7000	1000	6200	886			350	50	350	50	1100	14		
	ACTUAL			8178	8178	1000	7245	886	995	101	329	93	211	24	603	98	22	2808
	ACT LY			9909	9881	995	9030	851	1187	201	645	109	217	37	1200	203	29	2037
	BUD YTD			100900	100900	1000	89900	891			4600	46	4000	40	2400	24		
	ACT YTD			88980	88075	990	81302	889	14305	163	7880	89	2576	29	1811	20	321	2772
	LY YTD			91644	91537	999	66218	723	15188	166	5001	55	3077	34	2052	22	386	2374
K2	BUDGET			10200	9200	902	2210	217			1200	26	1200	26	2590	254		
	ACTUAL	13977	16791	8038	4918	612	1963	244	600	75	325	41			2028	252	13	6183
	ACT LY	11536	12988	9774	7952	814	2070	212	957	98	147	15			5176	530	15	6516
	BUD YTD			148200	75700	511	32490	219			2400	16	1830	12	38980	263		
	ACT YTD			165631	83271	503	29869	180	7893	48	2392	14	7		43087	260	187	8857
	LY YTD			180134	86203	538	33318	208	8298	52	2990	19	7		41588	260	238	8728
K3	BUDGET			7500	2800	373	1200	160			150	20	250	33	1200	160		
	ACTUAL	3179	3312	2858	1238	434	701	245	193	68	386	135			22	8	6	4764
	ACT LY	7142	7282	8224	1911	232	1311	159	238	29	203	25			140	17	13	4788
	BUD YTD			117800	43600	370	18435	156			2700	23	2040	17	20425	173		
	ACT YTD			87532	32653	373	12025	137	2788	32	4898	56			12940	148	104	8416
	LY YTD			107770	38792	360	13859	129	2587	24	4803	45			17741	165	126	8553
K4	BUDGET			10300	5900	573	4240	411			500	49	450	44	810	79		
	ACTUAL	6823	9335	11257	6004	533	3747	333	758	67	545	48	532	47	421	37	38	2962
	ACT LY	7116	7485	7855	2982	380	2778	474	728	124	709	121	1822	311	3047	520	24	2439
	BUD YTD			150100	85800	572	58900	392			6000	40	5400	36	17300	115		
	ACT YTD			171703	85290	497	63137	368	12355	72	11897	69	6559	38	8859	52	588	2920
	LY YTD			183638	74098	404	64442	351	13301	72	12077	66	8085	44	23807	130	600	3060
M1	BUDGET			18800	7300	388	4500	239			400	21	10	1	2390	127		
	ACTUAL	3860	3734	19525	8437	432	3377	173	734	38	833	43			3491	179	29	6732
	ACT LY	3886	2995	18124	12739	703	3570	197	754	42	48	3			8462	467	32	5663
	BUD YTD			250800	90700	362	59425	237			4800	19	120		32355	129		
	ACT YTD			249809	104890	420	49761	199	10328	41	5451	22	2		39348	157	420	5990
	LY YTD			235178	98344	418	43879	187	9314	40	2518	11	410	2	42223	180	378	6221
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPARTMENTAL OPERATIONS

SC05 (FOR EACT MONTEREY CA EXCHANGE NO 120180 PERIOD ENDING 28 JAN 90) C05

DEPT		INVENTORY AT COST		SALES	GROSS PROFIT		PAYROLL		EMPLOYEE BENEFITS		OTHER DIRECT EXP		EQUIP DEPRECIATION		NET DEPTL CONTRIB		NO OF EMPL EQUIV MAN MO	AVG $ SALES PER MAN MO
		B O M	E O M	AMOUNT	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS	AMOUNT	% TO SLS		
J1	BUDGET			11454	11110	970	8247	720			223	19	5		2635	230		
	ACTUAL	1472	1283	13843	13655	986	7808	564	1683	122	261	19			3901	282	53	2612
	ACT LY	570	1006	13784	13595	986	10354	751	1938	141	226	16	1		1074	78	54	2552
	BUD YTD			180064	172200	956	127850	710			2754	15	60		41536	231		
	ACT YTD			177405	172939	975	100508	567	22605	127	3681	21			46143	260	668	2655
	LY YTD			178784	174160	974	100215	561	23079	129	2670	15	16		48179	269	667	2680
J2	BUDGET			8200	7298	890	5412	660			292	36	75	9	1519	185		
	ACTUAL	2706	2593	6565	5893	898	3187	485	706	108	517	79	36	6	1446	220	16	4103
	ACT LY	2210	3803	7590	7790	1026	4200	553	909	120	377	50	5	1	2297	303	26	2919
	BUD YTD			96339	84647	879	63855	663			3496	36	900	9	16386	170		
	ACT YTD			86366	75176	870	45402	526	10158	118	3371	39	407	5	15837	183	303	2850
	LY YTD			100073	88956	889	50771	507	12212	122	3218	32	60	1	22692	227	316	3146
J3	BUDGET			70770	10252	145	3114	44			517	7	280	4	8351	90		
	ACTUAL	12080	12546	104269	3956	38	2480	23	895	9	386	3	31		9750	94	21	4965
	ACT LY	15807	6790	91669	13622	149	3656	40	882	10	406	4	49	1	8627	94	24	3819
	BUD YTD			1333949	194402	146	58623	44			7653	6	3440	3	124686	93		
	ACT YTD			1569788	285290	182	55471	35	12816	8	29582	19	466		186952	119	311	5047
	LY YTD			1370367	260509	190	51466	38	12276	9	13443	10	1065	1	182256	133	314	4364
J5	BUDGET			7400	7400	1000	6415	867			446	60	340	46	199	27		
	ACTUAL			7071	7071	1000	4434	627	1208	171	627	89	194	28	606	86	24	2946
	ACT LY			6178	6178	1000	5245	849	995	161	329	53	211	34	603	98	22	2808
	BUD YTD			96932	96932	1000	83554	862			3026	31	3760	39	6592	68		
	ACT YTD			106242	106242	1000	65829	620	16469	155	3056	29	2562	24	18325	172	363	2926
	LY YTD			88990	88075	990	61302	689	14505	163	7880	89	2576	29	1811	20	321	2771
K2	BUDGET			10621	5310	500	2335	220			121	11	100	9	2754	259		
	ACTUAL	17021	15899	9750	2793	286	2041	209	506	52	312	32			67-	7	14	6964
	ACT LY	17977	18791	8038	4918	612	1963	244	600	75	325	41			2028	252	13	6133
	BUD YTD			171157	84577	494	36403	213			1538	9	1200	7	45436	265		
	ACT YTD			139938	68674	491	28767	206	7495	54	3635	26	7		28768	206	181	7731
	LY YTD			165631	83271	503	29889	180	7893	48	2392	14	7		43087	260	187	8857
K3	BUDGET			7000	2650	380	1460	209			104	15	10	1	1086	155		
	ACTUAL	3414	3112	3280	4068	1240	331	101	1117	341	420	128			3198	975	17	4686
	ACT LY	3179	3312	2858	1232	431	701	245	193	68	366	128			22-	8	5	4764
	BUD YTD			94361	35855	380	19295	204			1269	13	120	1	15171	161		
	ACT YTD			63527	22082	348	10680	168	2759	43	2616	41			6028	95	95	6687
	LY YTD			87532	32853	375	12025	137	2788	32	4898	56			12940	148	104	8416
K4	BUDGET			10725	6113	570	3987	370			321	30	600	56	1225	114		
	ACTUAL	9097	9058	13382	9344	698	3727	278	889	66	742	55	297	22	3707	277	27	4955
	ACT LY	4823	9335	11257	6004	533	3747	333	756	67	545	48	532	47	421	37	38	2962
	BUD YTD			180589	102932	570	67330	373			3961	22	7200	40	28441	157		
	ACT YTD			238148	135711	570	64950	273	14891	63	15857	67	3948	17	36063	151	561	4245
	LY YTD			171703	85290	497	63137	368	12555	73	11897	69	6559	38	8859-	52	586	2920
K6	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	

FORM SC05 - REVISED 9/82

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPARTMENTAL OPERATIONS

SC0 — FC — SALEACT MONTEREY CA — EXCHANGE NO: 120180 — PERIOD ENDING: 27 JAN 91 — SC05

DEPT		INVENTORY AT COST B O M	INVENTORY AT COST E O M	SALES AMOUNT	GROSS PROFIT AMOUNT	GROSS PROFIT % TO SLS	PAYROLL AMOUNT	PAYROLL % TO SLS	EMPLOYEE BENEFITS AMOUNT	EMPLOYEE BENEFITS % TO SLS	OTHER DIRECT EXP AMOUNT	OTHER DIRECT EXP % TO SLS	EQUIP DEPRECIATION AMOUNT	EQUIP DEPRECIATION % TO SLS	NET DEPTL CONTRIB AMOUNT	NET DEPTL CONTRIB % TO SLS	NO OF EMPL EQUIV MAN MO	AVG $ SALES PER MAN MO
J1	BUDGET			17200	10808	985	5712	510			160	14			3256	291		
	ACTUAL	596	976	14525	14482	997	7466	514	1593	110	259	18			5163	355	55	2640
	ACT LY	1472	1282	13843	13655	986	7808	564	1683	122	261	19			3901	282	53	2612
	BUD YTD			173500	167424	965	90488	522			2753	16			48320	279		
	ACT YTD			179178	175096	977	99042	553	21079	118	3488	19			51485	287	614	2918
	LY YTD			177405	172939	975	100508	567	22605	127	3681	21			49143	280	588	2655
J2	BUDGET			5800	5162	890	3132	540			300	52	21	4	1013	175		
	ACTUAL	2991	2766	5962	5119	859	2404	403	565	95	274	46	33	6	1841	309	16	3726
	ACT LY	2706	2593	6565	5893	898	3187	485	706	108	517	79	36	6	1446	220	18	4103
	BUD YTD			87000	77430	890	46722	537			3600	41	306	4	16104	185		
	ACT YTD			84375	73691	862	43599	517	9990	118	3126	37	404	5	15571	185	276	3057
	LY YTD			80366	75176	870	45402	526	10158	118	3371	39	407	5	15837	183	303	2850
J3	BUDGET			95000	14250	150	5018	53			605	6	15		7930	83		
	ACTUAL	21418	20429	136496	25046	183	2663	20	637	5	889	7	18		20838	153	22	62043
	ACT LY	17080	15546	104269	7956	38	3480	33	895	9	1386	13	31		9750	94	21	49651
	BUD YTD			1541238	231186	150	59188	38			11797	8	260		146929	95		
	ACT YTD			1863381	323800	174	55008	30	13056	7	24829	13	287		230619	124	273	68255
	LY YTD			1589788	285290	182	55471	35	12816	8	29582	19	466		186952	119	311	50475
J5	BUDGET			8000	8000	1000	4320	720			150	25	292	49	218	36		
	ACTUAL			9802	9802	1000	5078	518	1185	121	1323	135	129	13	2085	213	27	3630
	ACT LY			7071	7071	1000	4434	627	1208	171	627	89	194	28	606	86	24	2946
	BUD YTD			104400	104400	1000	75168	720			2800	27	3184	30	5500	53		
	ACT YTD			117887	117887	1000	70447	598	16623	141	10520	89	2119	18	18176	154	382	3007
	LY YTD			106242	106242	1000	65829	620	16469	155	3056	29	2562	24	18325	172	363	2926
K2	BUDGET			9000	4500	500	2643	294			200	22			1324	147		
	ACTUAL	27418	28205	10616	4817	454	2213	208	446	42	219	21			1936	182	17	6244
	ACT LY	17021	15699	9750	2793	286	2041	209	506	52	312	32			67-	7	14	6964
	BUD YTD			149762	74879	500	36458	243			2400	16			30479	204		
	ACT YTD			156544	81628	521	30265	193	6277	40	2054	13	7		43022	275	197	7946
	LY YTD			139938	68674	491	28767	206	7495	54	3635	26	7		28768	206	181	7731
K3	BUDGET			3300	1254	380	508	154			100	30			534	162		
	ACTUAL	3468	4013	7460	2252	1542	539	389	144	99	278	190			1290	883	7	2086
	ACT LY	3414	3112	3280	4068	1240	331	101	117	36	420	128			3198	975	7	4686
	BUD YTD			69536	26424	380	9373	135			1200	17			13564	195		
	ACT YTD			55604	21492	387	10949	197	2750	49	1739	31			6052	109	83	6699
	LY YTD			63527	22082	348	10680	168	2759	43	2616	41			6026	95	95	6687
K4	BUDGET			12000	6840	570	3240	270			440	37	200	17	1784	149		
	ACTUAL	9347	10932	13094	5423	414	7218	551	1653	126	928	71	228	17	4605	352	29	4515
	ACT LY	9097	9058	15382	9344	607	3727	242	869	57	742	48	297	19	3707	241	27	5697
	BUD YTD			247000	140790	570	66690	270			9535	39	3000	12	37359	151		
	ACT YTD			250910	138708	553	64346	256	15237	61	12281	49	2850	11	43992	175	453	5538
	LY YTD			238148	135711	570	64950	273	14891	63	15857	67	3948	17	36063	151	961	4245
K6	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	

FORM SC05 - REVISED 8/87

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPARTMENTAL OPERATIONS

SC05 — NAVY MONTEREY CA — EXCHANGE NO 110380 — PERIOD ENDING 26 JAN 92 — SC05

	DEPT		INVENTORY AT COST B O M	INVENTORY AT COST E O M	SALES AMOUNT	GROSS PROFIT AMOUNT	GROSS PROFIT % TO SLS	PAYROLL AMOUNT	PAYROLL % TO SLS	EMPLOYEE BENEFITS AMOUNT	EMPLOYEE BENEFITS % TO SLS	OTHER DIRECT EXP AMOUNT	OTHER DIRECT EXP % TO SLS	EQUIP DEPRECIATION AMOUNT	EQUIP DEPRECIATION % TO SLS	NET DEPTL CONTRIB AMOUNT	NET DEPTL CONTRIB % TO SLS	NO OF EMPL EQUIV MAN MO	AVG $ SALES PER MAN MO
1	J1	BUDGET			17800	17317	973	7590	550	1904	138	173	13			7650	264		
2		ACTUAL	2088	1894	12617	12527	993	6341	503	1723	137	1046	83			3415	271	36	7320
3		ACT LY	596	976	14525	14482	997	7466	514	1593	110	259	18			5163	355	55	2640
4		BUD YTD			183659	177229	965	101012	550	25191	137	2096	11			48930	266		
5		ACT YTD			174720	169505	970	97607	559	24090	138	4720	27			46087	264	630	2773
6		LY YTD			179178	175096	977	99042	553	21079	118	3488	19			51485	287	618	2918
7	J2	BUDGET			9000	9340	890	3300	550	720	120	310	52	21	4	989	165		
8		ACTUAL	3078	2609	6240	5326	854	2613	419	704	113	716	115	25	4	1266	203	14	4457
9		ACT LY	2991	2766	5962	5119	859	2404	403	565	95	274	46	33	6	1841	309	16	3726
10		BUD YTD			93700	83393	890	51535	550	11592	124	3750	40	306	3	16210	173		
11		ACT YTD			82047	74807	912	39952	487	9048	110	3952	48	331	4	21523	262	212	3870
12		LY YTD			84375	72691	862	43599	517	9990	118	3126	37	404	5	15571	185	276	3057
13	J3	BUDGET			95000	19200	160	2230	24	665	17	1030	11	15		10260	108		
14		ACTUAL	23890	18711	118534	38019	326	4769	41	1411	12	1181	10	76	1	30579	262	29	40184
15		ACT LY	21418	20429	126496	25046	183	2663	20	637	5	889	7	18		20838	153	22	62043
16		BUD YTD			1353000	248480	160	52802	34	10871	7	12380	8	260		172167	111		
17		ACT YTD			1285657	218810	170	43382	34	8986	7	18393	14	245		147803	115	247	52050
18		LY YTD			1863381	323800	174	55008	30	13056	7	24829	13	287		230619	124	273	68255
19	J5	BUDGET			7000	7000	1000	4900	700	1050	150	175	25	350	50	525	75		
20		ACTUAL			14737	14737	1000	9110	347	1470	100	2238	152	512	35	9405	387	23	6407
21		ACT LY			9802	9802	1000	5078	518	1185	121	1323	135	129	13	2085	213	27	3630
22		BUD YTD			125487	125487	1000	87840	700	18788	150	2810	22	4200	33	11849	94		
23		ACT YTD			181727	181614	999	93248	513	21058	116	18011	99	5248	29	44048	242	467	389
24		LY YTD			117887	117887	1000	70447	598	16623	141	10520	89	2119	18	18176	154	392	3007
25	K2	BUDGET			10000	5800	580	2000	200	440	44	200	20			3160	316		
26		ACTUAL	48180	44785	13544	9835	726	2278	168	638	47	598	72			6220	459	14	9674
27		ACT LY	27418	28205	10516	4817	458	2213	209	446	42	219	21			1936	182	17	6244
28		BUD YTD			166878	96760	580	33267	199	7344	44	2420	15			53729	322		
29		ACT YTD			184084	85760	466	33685	183	6682	36	2514	14	3		42874	233	211	8724
30		LY YTD			156544	81628	521	30265	193	6277	40	2054	13	7		43022	275	197	7946
31	K3	BUDGET			3300	1650	500	700	212	180	55	80	24			690	209		
32		ACTUAL	2207	2342	843	298	353	24	29	23	28	720	853			421	499	2	4219
33		ACT LY	3468	4013	7460	2252	1542	539	389	144	99	278	190			1290	883	7	2086
34		BUD YTD			62000	31000	500	11600	187	2426	39	980	16			15994	258		
35		ACT YTD			46425	10037	216	3134	68	718	15	3615	78			2568	55	26	17855
36		LY YTD			55604	21492	387	10949	197	2750	49	1739	31			6052	109	83	6699
37	K4	BUDGET			11000	6270	570	3200	291	860	78	571	52	200	18	1439	131		
38		ACTUAL	8965	8965	9253	5116	553	3422	370	1011	109	511	55	147	16	22	2	22	4206
39		ACT LY	9347	10932	13094	9423	719	7218	551	1653	126	928	71	228	17	4605	352	29	4515
40		BUD YTD			137000	112575	571	45980	233	13596	69	11550	59	2400	12	39049	198		
41		ACT YTD			219330	114566	522	54031	246	12923	59	11563	53	2145	10	33902	155	425	5160
42		LY YTD			250910	138708	553	64346	256	15237	61	12281	49	2850	11	43992	175	453	5538
43	K6	BUDGET																	
44		ACTUAL																	
45		ACT LY																	
46		BUD YTD																	
47		ACT YTD																	
48		LY YTD																	
49		BUDGET																	
50		ACTUAL																	
51		ACT LY																	
52		BUD YTD																	
53		ACT YTD																	
54		LY YTD																	
55		BUDGET																	
56		ACTUAL																	
57		ACT LY																	
58		BUD YTD																	
59		ACT YTD																	
60		LY YTD																	

FORM SC05 - REVISED 8/82

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPARTMENTAL OPERATIONS

SC05 — FOR NEX MONTEREY CA — EXCHANGE NO: 110380 — PERIOD ENDING: 31 JAN 93 — SC05

DEPT		INVENTORY AT COST B O M	INVENTORY AT COST E O M	SALES AMOUNT	GROSS PROFIT AMOUNT	GROSS PROFIT % TO SLS	PAYROLL AMOUNT	PAYROLL % TO SLS	EMPLOYEE BENEFITS AMOUNT	EMPLOYEE BENEFITS % TO SLS	OTHER DIRECT EXP AMOUNT	OTHER DIRECT EXP % TO SLS	EQUIP DEPRECIATION AMOUNT	EQUIP DEPRECIATION % TO SLS	NET DEPTL CONTRIB AMOUNT	NET DEPTL CONTRIB % TO SLS	NO OF EMPL EQUIV MAN MO	AVG $ SALES PER MAN MO
J1	BUDGET			14300	13771	963	7865	550	1430	100	325	23			4151	290		
	ACTUAL	1009	990	14877	15915	1070	9069	610	1921	129	226	15			4698	316	40	3719
	ACT LY	2088	1694	12617	12527	993	6341	503	1723	137	1046	83			3415	271	38	3320
	BUD YTD			168610	162371	963	92736	550	16861	100	3900	23			48874	290		
	ACT YTD			183436	182069	993	103833	566	22157	121	7180	39			48892	267	597	3072
	LY YTD			174720	169505	970	97607	559	21090	121	4720	27			46087	264	630	2773
J2	BUDGET			8200	9754	928	2920	471	744	120	225	36	30	5	1835	296		
	ACTUAL	3040	4519	6560	6122	933	3394	517	774	118	70	11	22	3	1861	284	16	4100
	ACT LY	3078	2609	6240	5326	854	2613	419	704	113	716	115	25	4	1266	203	14	4457
	BUD YTD			77270	71707	928	36475	472	9272	120	2700	35	360	5	22900	296		
	ACT YTD			87078	73192	841	41929	482	9806	113	3941	45	267	3	17246	198	222	3922
	LY YTD			82047	74807	912	39952	487	9048	110	3952	48	331	4	21523	262	212	3870
J3	BUDGET			118500	12917	109	3555	30	1185	10	1400	12	30		6747	57		
	ACTUAL	21600	8496	143044	26806	187	4744	33	961	7	2569	18	146	1	18384	129	29	49325
	ACT LY	23890	18711	116534	38019	326	4769	41	1411	12	1181	10	76	1	30579	262	29	40184
	BUD YTD			497500	163228	109	44925	30	14975	10	16800	11	360		86168	58		
	ACT YTD			799020	336459	187	57950	32	11459	6	17304	10	1625	1	248120	138	320	56219
	LY YTD			1285657	218810	170	43382	34	8986	7	18393	14	1245	1	147803	115	247	52050
J4	BUDGET																	
	ACTUAL	9439	9805	3665	1785	3215					2	1			1782	3214		
	ACT LY																	
	BUD YTD																	
	ACT YTD			56380	22280	395					856	15			21423	380		
	LY YTD																	
J5	BUDGET			13500	13500	1000	6435	477	1890	140	650	48	600	44	3925	291		
	ACTUAL			17800	17800	1000	7238	673	1661	141	545	46	550	47	1806	153	34	3470
	ACT LY			14737	14737	1000	5110	347	1470	100	2238	152	512	35	5405	367	23	6407
	BUD YTD			183300	183300	1000	91500	499	25662	140	7800	43	7200	39	51138	279		
	ACT YTD			153955	153955	1000	80280	521	18526	120	18352	119	6934	45	29861	194	419	3674
	LY YTD			181727	181614	999	93248	513	21058	116	18011	99	5248	29	44048	242	467	3891
K2	BUDGET			12400	9572	530	2232	180	496	40	270	22	10	1	3564	287		
	ACTUAL	29235	29524	11120	3398	306	2439	219	532	48	32	3			392	35	14	7943
	ACT LY	46180	44785	13544	9835	726	2278	168	638	47	698	52			6220	459	14	9674
	BUD YTD			205400	108862	530	36972	180	8216	40	3240	16	120	1	60314	294		
	ACT YTD			176374	91676	520	30507	173	6845	39	2967	17			51355	291	184	9585
	LY YTD			184084	85760	466	33685	183	6682	36	2514	14	3		42874	233	211	8724
K3	BUDGET			14700	5145	350	182	12	50	3	220	15			4693	319		
	ACTUAL	1691	1686	1817	122	07	47	26	3	2	78	43			94	52		
	ACT LY	2207	2342	1043	298	285	24	23	23	22	720	690			421	403	2	4219
	BUD YTD			49650	17378	350	2184	44	600	12	2640	53			11954	241		
	ACT YTD			40152	12080	301	2868	71	327	8	1924	48			6959	173	16	25095
	LY YTD			46425	10037	216	3134	68	718	15	3615	78			2568	55	26	17855
K4	BUDGET			18000	9360	520	4189	233	900	50	1175	65	200	11	2896	161		
	ACTUAL	8446	7739	8781	3773	556	3203	472	698	103	627	92	190	28	945	139	23	2948
	ACT LY	8965	8965	9253	3116	593	3422	370	1011	109	511	55	147	16	22	2	22	4206
	BUD YTD			233200	127264	520	54368	234	11660	50	14100	60	2400	10	38536	165		
	ACT YTD			173003	89782	519	53822	311	10834	63	9066	52	2104	12	13953	81	431	4014
	LY YTD			219330	114566	522	54031	246	12923	59	11563	53	2145	10	33902	155	425	5160
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	
	BUDGET																	
	ACTUAL																	
	ACT LY																	
	BUD YTD																	
	ACT YTD																	
	LY YTD																	

APPENDIX C. SC06 FINANCIAL REPORTS

NAVY EXCHANGE, DEPARTMENT J-3, FUELS,

NAVAL POSTGRADUATE SCHOOL,

MONTEREY, CALIFORNIA

FY 1988 - 1992

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION

SC06 SERVICE DEPT EMPL BENEFITS-OTHER DIR EXP FOR: 26SALEACT MONTEREY CA EXCHANGE NO: 120180 PERIOD ENDING: 29 JAN 89 SC06

DEPARTMENT		ACC 312 PROVISION FOR ANNUAL LEAVE	ACC 314 EMPL BEN LOCAL NATL	ACC 316 TAXES-FICA	ACC 318 RETIREMENT ANNUITY CONT.	TOTAL EMPLOYEE BENEFITS	ACC 310 AREA SUPPORT ALLOCATION	ACC 313 STATIONERY & SUPPLIES	ACC 315 REPAIRS & MINOR REPLACE	ACC 317 UTILITY EXPENSE	ACC 319 MISCELLANEOUS EXPENSE	TOTAL OTHER DIRECT EXPENSE
J1 BARBER SHOP	BUDGET											
	ACTUAL	929		875	333	1938		6		50	169	226
	ACTUAL LY	806		735	360	1902		4		50	21	78
	BUD YTD											
	ACT YTD	10313		8361	4404	23079		18	43	600	2007	2670
	LY YTD	10377		7925	3649	21951		288		532	1671	2491
J2 BEAUTY SAL	BUDGET											
	ACTUAL	502		313	93	909		2	9	64	201	277
	ACTUAL LY	479		407	204	1091		132	4	64	74	275
	BUD YTD											
	ACT YTD	5639		4372	2200	12212		136	145	768	2169	3218
	LY YTD	6694		4665	2490	13850		507	45	879	2228	3660
J3 FUEL	BUDGET											
	ACTUAL	339		369	173	882				250	156	406
	ACTUAL LY	245		243	108	597		62		250	130	442
	BUD YTD											
	ACT YTD	5624		4332	2319	12276		102	4282	5347	3710	13443
	LY YTD	4445		3973	1420	9839		283	1223	3115	4092	8714
J5 SERVC/LABOR	BUDGET											
	ACTUAL	533		293	169	995		82-	108-	25	472	329
	ACTUAL LY	562		471	153	1187		94		25	526	645
	BUD YTD											
	ACT YTD	6891		5059	2553	14505		540	716	1943	4681	7880
	LY YTD	7854		5382	2172	15188		341	352	2081	2246	5001
K2 OPTICAL	BUDGET											
	ACTUAL	232		215	152	600				20	305	325
	ACTUAL LY	249		197	110	557		2		20	124	147
	BUD YTD											
	ACT YTD	3590		2542	1760	7893				240	2152	2392
	LY YTD	4033		2740	1524	8298		18	33	210	2728	2990
K3 FLOWER SHOP	BUDGET											
	ACTUAL	83		64	45	193			171	100	95	366
	ACTUAL LY	118		118	3	238		17		100	85	203
	BUD YTD											
	ACT YTD	1449		998	341	2788		30	492	1200	3176	4898
	LY YTD	1473		1081	52	2587		47	788	812	3356	4803
K4 FNTN. SNACK	BUDGET											
	ACTUAL	335		366	54	756		6	19	275	245	545
	ACTUAL LY	312		327	89	728			226	275	207	709
	BUD YTD											
	ACT YTD	5915		5055	1384	12355		234	2541	1300	5821	11897
	LY YTD	6527		5242	1532	13301		97	1728	5399	4851	12077
M1 LAUNDRY/DR	BUDGET											
	ACTUAL	332		312	89	734				100	733	833
	ACTUAL LY	305		339	109	754			20	100	188-	48-
	BUD YTD											
	ACT YTD	4361		4207	1357	10326		24	288	1200	3958	5451
	LY YTD	4324		3803	1386	9314		49	24	894	1549	2516
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION

SC06 ERVICE DEPT EMPL BENEFITS-OTHER DIR EXP FOR LEACT MONTEREY CA EXCHANGE NO 120180 PERIOD ENDING 28 JAN 90 206

DEPARTMENT		ACC 312 PROVISION FOR ANNUAL LEAVE	ACC 314 EMPL BEN LOCAL NATL	ACC 316 TAXES-FICA	ACC 318 RETIREMENT ANNUITY CONT	TOTAL EMPLOYEE BENEFITS	ACC 310 AREA SUPPORT ALLOCATION	ACC 313 STATIONERY & SUPPLIES	ACC 315 REPAIRS & MINOR REPLACE	ACC 317 UTILITY EXPENSE	ACCS 303 304 306 319 MISC EXPENSES	TOT OTHER DIRECT EXPENSE
J1 BARBER SHOP	BUDGET											
	ACTUAL	793		702	188	1683		66		50	145	261
	ACTUAL LY	929		675	333	1938		6		50	169	226
	BUD YTD											
	ACT YTD	10502		8304	3798	22605		590	383	569	2139	3681
	LY YTD	10313		8361	4404	23079		18	43	600	2007	2670
J2 BEAUTY SA	BUDGET											
	ACTUAL	312		267	126	706		75	16	64	361	517
	ACTUAL LY	502		313	93	909		2	9	64	301	377
	BUD YTD											
	ACT YTD	5173		3651	1333	10158		556	96	723	1995	3371
	LY YTD	5639		4372	2200	12212		136	145	768	2169	3218
J3 FUEL	BUDGET											
	ACTUAL	349		378	166	895		208	369	544	263	1386
	ACTUAL LY	339		369	173	882				250	156	406
	BUD YTD											
	ACT YTD	6076		4580	2160	12816		799	3461	5178	20144	29582
	LY YTD	5624		4332	2319	12276		102	4282	5347	3710	13443
J5 SERVC/LABOR	BUDGET											
	ACTUAL	535		445	227	1208		343	333	231	180-	527
	ACTUAL LY	533		293	169	995		62	106-	25	472	529
	BUD YTD											
	ACT YTD	8041		5533	2894	16469		1420	2248	1720	2333-	3056
	LY YTD	6891		5059	2553	14505		540	716	1943	681	7880
K2 OPTICAL	BUDGET											
	ACTUAL	246		199	59	506		77		20	214	312
	ACTUAL LY	232		215	152	600				20	305	325
	BUD YTD											
	ACT YTD	3480		2538	1475	7495		1257	95	228	2054	3635
	LY YTD	3590		2542	1760	7893				240	2152	2392
K3 FLOWER SHO	BUDGET											
	ACTUAL	41		37	38	117		58	114		247	420
	ACTUAL LY	83		64	45	193			171	100	95	366
	BUD YTD											
	ACT YTD	1292		877	589	2759		504	467	200-	1844	2616
	LY YTD	1449		996	341	2788		30	492	1200	3176	4898
K4 FNTN. SNACK	BUDGET											
	ACTUAL	373		324	170	869		25-	124	275	368	742
	ACTUAL LY	335		366	54	756		6	19	275	245	545
	BUD YTD											
	ACT YTD	7003		5182	2705	14891		891	4495	3116	7354	15857
	LY YTD	5915		5055	1584	12555		234	2541	3300	5821	11897
M1 LAUNDRY/DRY	BUDGET											
	ACTUAL	321		371	177	870		58	86	100	228	473
	ACTUAL LY	332		312	89	734				100	739	933
	BUD YTD											
	ACT YTD	4205		3787	1583	9576		924	209	1138	3363	5634
	LY YTD	4561		4207	1557	10326		24	268	1200	3958	5451
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPT EMPL BENEFITS-OTHER DIR EXP

SCO | FC ESALEACT MONTEREY CA | EXCHANGE NO 120180 | PERIOD ENDING 27 JAN 91 | SC06

DEPARTMENT		ACC 312 PROVISION FOR ANNUAL LEAVE	ACC 314 EMPL BEN LOCAL NATL	ACC 316 TAXES-FICA	ACC 318 RETIREMENT ANNUITY CONT	TOTAL EMPLOYEE BENEFITS	ACC 310 AREA SUPPORT ALLOCATION	ACC 313 STATIONERY & SUPPLIES	ACC 315 REPAIRS & MINOR REPLACE	ACC 317 UTILITY EXPENSE	ACCS 303 304 308. 319 MISC EXPENSES	TOTAL OTHER DIRECT EXPENSE
J1 BARBER SHOP	BUDGET	1680				1680	10	10	15	105	20	160
	ACTUAL	829		681	81	1593		136		50	73	259
	ACTUAL LY	793		702	188	1683		66		50	145	261
	BUD YTD	25863				25863	152	126	290	1339	846	2753
	ACT YTD	11091		8192	1795	21079		1051	641	720	1075	3488
	LY YTD	10502		8304	3798	22605		590	383	569	2139	3881
J2 BEAUTY SA	BUDGET	696				696	15	15	10	70	190	300
	ACTUAL	291		230	44	565		165		64	45	274
	ACTUAL LY	312		267	126	706		75	16	64	361	517
	BUD YTD	10698				10698	180	180	120	840	2280	3600
	ACT YTD	5152		3682	1155	9990		263	890	801	1170	3125
	LY YTD	5173		3851	1333	10158		556	98	723	1995	3371
J3 FUEL	BUDGET	582				582	200	20		300	85	605
	ACTUAL	323		267	46	637		227	320	250	92	889
	ACTUAL LY	349		378	168	895		208	369	544	265	1386
	BUD YTD	13012				13012	2515	240	1980	4100	2962	11797
	ACT YTD	8657		4679	1719	13056		1459	5799	9375	8195	24829
	LY YTD	8076		4580	2160	12816		799	3461	5178	20144	29582
J5 SERVC/LABOR	BUDGET	1020				1020	10	15	25	65	35	150
	ACTUAL	914		495	75	1185		917	522	25	142	1323
	ACTUAL LY	535		445	227	1208		343	233	231	180	827
	BUD YTD	17748				17748	120	180	450	1330	720	2800
	ACT YTD	8455		5987	2200	16823		4458	3229	2234	599	10820
	LY YTD	8041		5533	2894	16469		1420	2248	1720	2333	3056
K2 OPTICAL	BUDGET	933				933	35	10	30	25	100	200
	ACTUAL	235		193	17	446		148		20	51	219
	ACTUAL LY	246		199	59	506		77		20	214	312
	BUD YTD	5542				5542	420	120	360	300	1200	2400
	ACT YTD	3197		2535	545	6277		101	37	609	1305	2054
	LY YTD	3480		2538	1475	7495		1257	95	228	2054	3635
K3 FLOWER SH	BUDGET	112				112	25	10	10	30	25	100
	ACTUAL	66		55	22	144		136	76		65	278
	ACTUAL LY	41		37	38	117		58	114		247	420
	BUD YTD	2287				2287	300	120	120	360	300	1200
	ACT YTD	1324		935	490	2750		20	508		1253	1739
	LY YTD	1292		877	589	2759		504	467	200	1844	2816
K4 FNTN. SNACK	BUDGET	1176				1176	40	20	50	200	130	440
	ACTUAL	887		623	182	1853		185	246	275	221	928
	ACTUAL LY	373		324	170	869		25	124	275	368	742
	BUD YTD	24206				24206	580	490	2200	3860	2405	9535
	ACT YTD	7763		5300	2173	15237		655	5364	3282	2999	12281
	LY YTD	7003		5182	2705	14891		891	4495	3116	7354	15857
K6 FAST FOOD	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SERVICE DEPT EMPL BENEFITS-OTHER DIR EXP

SC[redacted] X MONTEREY CA — EXCHANGE NO: 110380 — PERIOD ENDING: 26 JAN 92 — SC06

DEPARTMENT		ACC 312 PROVISION FOR ANNUAL LEAVE	ACC 314 EMPL BEN LOCAL NATL	ACC 316 TAXES-FICA	ACC 318 RETIREMENT ANNUITY CONT	TOTAL EMPLOYEE BENEFITS	ACC 210 AREA SUPPORT ALLOCATION	ACC 213 STATIONERY & SUPPLIES	ACC 215 REPAIRS & MINOR REPLACE	ACC 217 UTILITY EXPENSE	ACCS 301, 302 304, 308, 310 MISC EXPENSES	TOTAL OTHER DIRECT EXPENSE
J1 BARBER SHOP	BUDGET	1904				1904	12	10	25	50	76	173
	ACTUAL	855		589	278	1723		42	100	55	847	1046
	ACTUAL LY	829		681	81	1593		136		50	73	259
	BUD YTD	25191				25191	144	140	300	800	912	2096
	ACT YTD	11224		8452	1413	21090		624	801	659	3035	4720
	LY YTD	11091		8192	1795	21079		1051	841	720	1075	3488
J2 BEAUTY SA	BUDGET	720				720	15	15	10	70	200	310
	ACTUAL	366		232	105	704		27	38	18	632	716
	ACTUAL LY	291		230	44	565		165		64	45	274
	BUD YTD	11592				11592	180	210	120	840	2400	3750
	ACT YTD	4883		3309	855	9048		409	666	778	2097	3952
	LY YTD	5152		3682	1155	9990		263	890	801	1170	3126
J3 FUEL	BUDGET	865				865	200	20	200	350	260	1030
	ACTUAL	720		470	220	1411		119	427	72	561	1181
	ACTUAL LY	723		267	46	837		227	320	250	92	889
	BUD YTD	10871				10871	2400	260	2400	4200	3120	12380
	ACT YTD	4805		3486	694	8986		1105	8250	6280	2757	18393
	LY YTD	8657		4679	1718	13056		1459	5799	8375	8195	24828
J5 SERVC/LABOR	BUDGET	1050				1050	10	15	25	65	60	175
	ACTUAL	777		471	222	1470		302	48	17	1905	2238
	ACTUAL LY	814		495	75	1185		917	522	25	142	1323
	BUD YTD	18788				18788	120	190	450	1330	720	2810
	ACT YTD	11449		7961	1646	21058		10358	5371	359	1922	18011
	LY YTD	8455		5867	2200	16823		4458	3229	2234	699	10620
K2 OPTICAL	BUDGET	440				440	35	10	30	25	100	200
	ACTUAL	341		200	96	638		86	14	35	561	698
	ACTUAL LY	235		193	17	446		148		20	51	219
	BUD YTD	7344				7344	420	140	360	300	1200	2420
	ACT YTD	3550		2743	389	6682		209	124	252	1928	2514
	LY YTD	3197		2535	545	6277		101	37	609	1305	2054
K3 FLOWER SH	BUDGET	180				180	25	10	10		35	80
	ACTUAL			10	13	23		179	57		642	720
	ACTUAL LY	66		55	22	144		136	76		65	278
	BUD YTD	2426				2426	300	140	120		420	980
	ACT YTD	375		289	53	718		288	1226		2677	3615
	LY YTD	1324		935	490	2750		20	506		1253	1739
K4 FNTN, SNAC	BUDGET	860				860	171	10	50	200	140	671
	ACTUAL	632		333	146	1011		70	45	221	616	611
	ACTUAL LY	867		523	162	1553		185	246	275	221	928
	BUD YTD	12596				12596	2705	350	2200	3860	2435	11550
	ACT YTD	6885		4883	1354	12923		522	4100	2461	4479	11563
	LY YTD	7763		5300	2173	15237		655	5364	3262	2999	12281
K6 FAST FOOD	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											

FORM SC06 - REVISED 11/90

NAVY RESALE AND SERVICES SUPPORT OFFICE
NAVY EXCHANGE DIVISION
SC06 SERVICE DEPT EMPL BENEFITS-OTHER DIR EXP

FOR: NEX MONTEREY CA

EXCHANGE NO: 110380
PERIOD ENDING: 31 JAN 93

SC06

DEPARTMENT		ACC 312 PROVISION FOR ANNUAL LEAVE	ACC 314 EMPL BEN LOCAL NATL	ACC 316 TAXES-FICA	ACC 318 RETIREMENT ANNUITY CONT	TOTAL EMPLOYEE BENEFITS	ACC 310 AREA SUPPORT ALLOCATION	ACC 313 STATIONERY & SUPPLIES	ACC 315 REPAIRS & MINOR REPLACE	ACC 317 UTILITY EXPENSE	ACCS 301, 303 304, 306, 319 MISC EXPENSES	TOTAL OTHER DIRECT EXPENSE
J1 BARBER SHOP	BUDGET	1430				1430		20	25	50	230	325
	ACTUAL	1099		729	92	1921		17	93	80	34	226
	ACTUAL LY	855		589	278	1723		42	100	55	847	1046
	BUD YTD	16861				16861		240	300	600	2760	3900
	ACT YTD	12535		8449	1172	22157		1039	2076	2087	1676	7180
	LY YTD	11224		8452	1413	21090		524	601	559	3035	4720
J2 BEAUTY SAL	BUDGET	744				744		20	50	50	105	225
	ACTUAL	433		274	66	774		6	4	36	24	70
	ACTUAL LY	366		232	105	704		27	38	18	632	716
	BUD YTD	9272				9272		240	600	600	1260	2700
	ACT YTD	5506		3499	801	9806		434	198	1663	1645	3241
	LY YTD	4883		3309	855	9048		409	666	778	2097	3952
J3 FUEL	BUDGET	1185				1185		100	500	400	400	1400
	ACTUAL	510		430	20	961		103	315	2068	81	2569
	ACTUAL LY	720		470	220	1411		119	427	72	561	1181
	BUD YTD	14975				14975		1200	6000	4800	4800	16800
	ACT YTD	6551		4485	422	11459		1006	8051	7099	1147	17304
	LY YTD	4805		3486	694	8986		1105	8250	6280	2757	18393
J4 AUTO INS	BUDGET											
	ACTUAL							2				2
	ACTUAL LY											
	BUD YTD											
	ACT YTD							39-	14		881	856
	LY YTD											
J5 SERVC/LABOR	BUDGET	1890				1890		50	200	100	300	650
	ACTUAL	971		611	78	1661		29	277	75	163	545
	ACTUAL LY	777		471	222	1470		302	48	17-	1905	2238
	BUD YTD	25662				25662		600	2400	1200	3600	7800
	ACT YTD	10795		6793	938	18526		1370	2469	2405	12108	18352
	LY YTD	11449		7961	1646	21058		10358	5371	359	1922	18011
K2 OPTICAL	BUDGET	496				496		40	50	50	130	270
	ACTUAL	301		206	24	532				30	2	32
	ACTUAL LY	341		200	96	638		86	14	35	561	698
	BUD YTD	8216				8216		480	600	600	1560	3240
	ACT YTD	3969		2529	345	6845		477	95	1738	857	2967
	LY YTD	3550		2743	389	6682		209	124	252	1928	2514
K3 FLOWER SHOP	BUDGET	50				50					220	220
	ACTUAL			3-		3-		1-	70		10	78
	ACTUAL LY			10	13	23		179-	57		942	720
	BUD YTD	900				900					2940	2940
	ACT YTD	70		247	10	327		37	203	405	1279	1924
	LY YTD	375		289	53	718		288-	1226		2677	3815
K4 FNTN, SNACK	BUDGET	900				900		25	400	200	550	1175
	ACTUAL	598		261	40	898			178	325	123	627
	ACTUAL LY	532		333	146	1011		70	45	221-	916	511
	BUD YTD	11660				11660		200	4800	2400	6800	14100
	ACT YTD	5837		4320	576	10834		440	3567	5624	565-	9066
	LY YTD	6885		4883	1354	12923		522	4100	2481	4479	11583
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											
	BUDGET											
	ACTUAL											
	ACTUAL LY											
	BUD YTD											
	ACT YTD											
	LY YTD											

APPENDIX D. RADIAN CORPORATION UPGRADE ESTIMATES

FUEL STORAGE TANK UPGRADE ALTERNATIVES I - III

FROM RADIAN CORPORATION RETROFIT STUDY

OF UNDERGROUND STORAGE TANKS

AT THE NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

JULY 1992

Table 5-1

Cost Estimate to Retrofit Existing USTs
Alternative I

Tank Number	Group 1 Tanks			Group 2 Tanks			Group 3 Tanks		
	236-1	236-2	236-3	330	700	708	348-1	348-2	348-3
Volume (gallons)	10,000	10,000	10,000	6,000	8,000	12,000	10,000	15,000	20,000
Contents	No. 5 Oil	No. 5 Oil	No 5 Oil	Diesel	Diesel	Diesel	Unleaded Gas	Unleaded Gas	Super Unleaded Gas
Date Installed	1952	1952	1952	1980	1975	1987	1973	1969	1969
Construction	Single-wall Steel	Single-wall Steel	Single-wall Steel	Single-wall Fiberglass	Single-wall Fiberglass	Double-wall Fiberglass	Single-wall Fiberglass	Single-wall Steel	Single-wall Steel
INITIAL RETROFITTING COSTS ($)[1]									
Cathodic Protection	3,400	3,400	3,400	6,600[2]	6,600[2]	6,600[2]	N/A	3,400[3]	3,400[3]
Overfill/Spill Protection/ATGS	5,300	5,300	5,300	10,600	10,600	10,600	N/A	N/A	N/A
Vadoze Zone and Groundwater Monitoring - Leak Detection	6,700	6,700	6,700	6,700	6,700	N/A	N/A	N/A	N/A
1998 SECONDARY CONTAINMENT RETROFIT COSTS–TANK REMOVAL COSTS ($)									
Temporary Fuel Storage	750	750	750	500	600	N/A	750	900	1,200
Concrete Removal	650	650	650	1,000	1,000	N/A	650	650	650
Excavation/Removal/Transportation/ Disposal	1,900	1,900	1,900	2,100	2,650	N/A	2,400	2,400	2,400
Soil Sampling/Analysis/Reporting	1,000	1,000	1,000	1,000	1,000	N/A	1,000	1,000	1,000
REPLACEMENT COSTS ($)									
Labor and Equipment	9,700	9,700	9,700	21,000	21,000	9,700	9,700	9,700	9,700
Tank	15,750	15,750	15,750	12,200	13,650	N/A	15,750	22,500	29,600
Piping and Tie Downs	4,950	4,950	4,950	5,000	5,000	5,000	300	300	300
Electrical	1,350	1,350	1,350	2,500	2,500	2,500	1,350	1,350	1,350
Backfill/Compact	1,000	1,000	1,000	2,900	2,900	1,000	1,000	1,000	1,000
Concrete Slab	1,200	1,200	1,200	1,800	1,800	1,800	1,200	1,200	1,200

tbl 5-1 692/navy UST/6 92

Table 5-1

(Continued)

Tank Number	Group 1 Tanks			Group 2 Tanks			Group 3 Tanks		
	236-1	236-2	236-3	330	700	708	348-1	348-2	348-3
PRE-1998—OPERATIONAL COSTS ($)									
Test Cathodic System	1,400/3 yr	1,400/3 yr	1,400/3 yr	1,000/3 yr[2]	1,000/3 yr[2]	1,000/3 yr[2]	N/A	1,000/3 yr[3]	1,000/3 yr[3]
Manual Tank Gauging	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inventory Control	1,400/yr	1,400/yr	1,400/yr	1,400/yr	1,400/yr	1,400/yr	1,400/yr	1,400/yr	1,400/yr
Tightness Testing	600/yr	600/yr	600/yr	600/yr	600/yr	600/yr	600/yr	600/yr	600/yr
POST-1998—OPERATIONAL COSTS ($)									
Inventory Control	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr
Tightness Testing	600/3 yr	600/3 yr	600/3 yr	600/3 yr	600/3 yr	600/3 yr	600/yr	600/yr	600/yr
TOTAL PRESENT WORTH RETROFIT COSTS	38,208	38,208	38,208	53,715	54,967	29,126	20,334	27,848	32,261
PRESENT WORTH OPERATIONAL COSTS[5]	16,615	16,615	16,615	15,906	15,907	15,906	15,624	17,398	17,397
TOTAL PRESENT WORTH COSTS ($)[6]	54,823	54,823	54,823	69,621	70,874	45,032	35,958	45,246	49,658

[1] Costs include labor, excavation, and materials.
[2] Pipelines only.
[3] Tank only.
[4] After January 1, 1993, inventory reconciliation and other leak detection methods that utilize manual stick readings shall not be used where groundwater is less than 20 feet below the bottom of the tank. Manual stick readings shall not be used after December 22, 1998.
[5] Based on a 15 year period.
[6] Present worth calculated assuming a 9% interest rate. Inflation not considered.

RADIAN CORPORATION

Table 5-2

Cost Estimate to Replace with New USTs
Alternative II

Tank Number	Group 1 Tanks			Group 2 Tanks			Group 3 Tanks		
	236-1	236-2	236-3	330	700	708[1]	348-1[2]	348-2[2]	348-3[2]
Current Capacity (gallons)	10,000	10,000	10,000	6,000	8,000	12,000	10,000	15,000	20,000
Replacement Capacity (gallons)	10,000	10,000	10,000	6,000	8,000	N/A	10,000	15,000	20,000
TANK REMOVAL COSTS ($)									
Temporary Fuel Storage	750	750	750	500	600	N/A	750	900	1,200
Concrete Removal	650	650	650	1,000	1,000	N/A	650	650	650
Excavation/Removal/Transportation/ Disposal	1,900	1,900	1,900	2,100	2,650	N/A	2,400	2,400	2,400
Soil Sampling/Analysis/Reporting	1,000	1,000	1,000	1,000	1,000	N/A	1,000	1,000	1,000
REPLACEMENT COSTS ($)									
Labor and Equipment	9,700	9,700	9,700	21,000	21,000	9,700	9,700	9,700	9,700
Overfill/Spill Protection	750	750	750	750	750	750	N/A	N/A	N/A
Tank	15,750	15,750	15,750	12,200	13,650	N/A	15,750	22,500	29,600
Piping and Tie Downs	4,950	4,950	4,950	5,000	5,000	5,000	300	300	300
Leak Detection - Tank and Piping/ATGS	3,000	3,000	3,000	5,650	5,650	5,650	3,000	3,000	3,000
Electrical	1,350	1,350	1,350	2,500	2,500	2,500	1,350	1,350	1,350
Backfill/Compact	1,000	1,000	1,000	2,900	2,900	1,000	1,000	1,000	1,000
Concrete Slab	1,200	1,200	1,200	1,800	1,800	1,800	1,200	1,200	1,200

Table 5-2

(Continued)

Tank Number	Group 1 Tanks			Group 2 Tanks			Group 3 Tanks		
	236-1	236-2	236-3	330	700	708[1]	348-1[2]	348-2[2]	348-3[2]
OPERATIONAL COSTS ($)									
Inventory Control	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr	900/yr
Tightness Testing	600/3 yr	600/3 yr	600/3 yr	600/3 yr	600/3 yr	600/3 yr	600/yr	600/yr	600/yr
TOTAL REPLACEMENT COSTS	42,000	42,000	42,000	56,400	58,500	26,400	37,100	44,000	51,400
PRESENT WORTH OPERATIONAL COSTS[3]	9,331	9,331	9,331	9,331	9,331	9,331	13,180	13,180	13,180
TOTAL PRESENT WORTH COSTS ($)[4]	51,331	51,331	51,331	65,731	67,831	35,731	50,280	57,180	64,580

[1] Tank will not be replaced.
[2] Piping will not be replaced.
[3] Based on a 15-year period.
[4] Present worth calculated assuming a 9% interest rate. Inflation not considered.

Table 5-3

Cost Estimate to Replace with ASTs
Alternative III

Tank Number	Group 1 Tanks			Group 2 Tanks			Group 3 Tanks		
	236-1	236-2	236-3	330	700	708	348-1	348-2	348-3
Current Capacity (gallons)	10,000	10,000	10,000	6,000	8,000	12,000	10,000	15,000	20,000
Replacement Capacity (gallons)	10,000	10,000	10,000	6,000	8,000	12,000	6,000	6,000	6,000
TANK REMOVAL COSTS ($)									
Temporary Fuel Storage	750	750	750	500	600	750	750	900	1,200
Concrete Removal	650	650	650	1,000	1,000	1,000	650	650	650
Excavation/Removal/Transportation/ Disposal	1,900	1,900	1,900	2,100	2,650	3,000	2,400	2,400	2,400
Soil Sampling/Analysis/Reporting	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Backfill/Compact	1,000	1,000	1,000	2,900	2,900	2,900	1,000	1,000	1,000
REPLACEMENT COSTS ($)									
Labor and Equipment	5,000	5,000	5,000	5,050	5,500	7,900	5,050	5,050	5,050
Concrete, Rebar, and Bumpers	4,000	4,000	4,000	5,000	6,400	10,000	5,000	5,000	5,000
Concrete Coating	400	400	400	650	650	650	200	200	200
Tanks and Pumps	44,050	44,050	44,050	34,000	39,150	52,150	34,000	34,000	34,000
Piping[1]	4,650	4,650	4,650	4,700	4,700	4,700	0	0	0
Electrical	600	600	600	600	600	600	600	600	600
Chain Link Fence	600	600	600	1,000	1,000	1,400	600	600	600
Permits[2]	200/2 yr	200/2 yr	200/2 yr	200/2 yr	200/2 yr	200/2 yr	200/2 yr	200/2 yr	200/2 yr
TOTAL PRESENT WORTH COSTS ($)[3]	65,545	65,545	65,545	59,445	66,895	86,995	52,195	52,345	52,645

[1] Assume same piping requirements as outlined in Alternative II.
[2] Based on 15-year time period.
[3] Present worth calculated assuming a 9% interest rate. Inflation not considered.

tbl 5-3 692/navy UST/6-92

APPENDIX E. CUSTOMER SURVEY COMMENTS

MARCH - APRIL 1993

The following comments have been compiled from completed surveys. The numbers preceding the comments represent the survey on which the comments were recorded. These numbers were assigned to surveys only upon their return for purposes of results organization and reference. The numbers do not reveal the identity of the respondent.

---

12. - Don't use (station) because use a gas credit card.
    - The parking capacity would be limited and remote.
    - People should utilize the bus from La Mesa instead of decreasing services provided on base.
    - Every means of saving money for the service member needs to be guarded.

14. I believe the NEX gas station is a benefit to me two ways
    1) Convenience (close and easy)
    2) Economically (inexpensive gas)
    It would annoy me if the gas station were closed down.

15. Been here for two years - parking has been a nuisance but not unsurmountable. Don't believe should sacrifice a good service for more parking.
    (Thesis research on the Navy Exchange Gas Station? Get a clue.)

16. Getting rid of a permanent service just for a temporary fix to a problem is not a solution - besides town, when Fort Ord closes where will we go then?

17. If Fort Ord closes entirely then NEX privilege must be maintained.

19. You forgot about the key - SERVICE. They don't provide it. That's why I go elsewhere for service.

22. It's a matter of convenience rather than cost savings. Prices don't seem to be much cheaper than in town.

26. Consider gas station a privilege not a right. What is the point of your thesis? To prove whether or not we need a gas station? You might be better served to do an economic analysis.

28. Neutral on closing as long as Fort Ord remains available.

29. The gas station is another great benefit! Don't take it away.

33. What happens when Fort Ord closes?

35. I doubt people would want to park there. It's too far to walk to classes.

36. I tried to buy gas at NEX once but the attendant was rude and refused to allow me to pump gas at 1701 hours. The station closed at 1700. No service = No customer.

37. The bottom line is if the gas station is closed it would take money out of my <u>pocket</u>!

38. People should get off their butts and carpool, walk, ride the bus or a bike if they feel parking is a problem.

40. Re: Question 8. Benefit vs. right are contrasting terms.

41. Closing the gas station in place of additional parking would be a terrible swap.

43. The service is poor, the employees attitudes are very poor, and the organization of how you pump gas and pay is ludicrous! I get very frustrated everytime I go there so I usually stay away!

44. Exchange gas station does not accept American Express credit card (so I don't use the station).

46. Regarding gasoline quality - This is a stupid question since none of us has any means of testing it!
-I would hate to drive to Fort Ord for gas!

50. The current set-up - pay inside is stupid. Takes too long to pay making for lines. If the exchange can't get its act together then just drop the station. Also, never checks I.D.s, I've seen <u>everyone</u> filling up there!

52. Without the gas station there would be no reason at all to visit this exchange. The exchange is improving but for me the only reason I used it is because I've stopped to get gas.

54. Definitely don't close the gas station and leave the mechanics. That is the worst run, most inefficient and unethical service station I've ever been to!

56. The exchange gas station should keep more islands open. Quite often you have to wait in line to get gas while half the pumps are blocked off.

57. It's convenient - and I can pay by check - That's why I use it.

60. I would like to be able to purchase mid-grade unleaded like at Fort Ord gas station.

61. They need to speed up the cashier service.

64. As far as I can tell, there is no cheaper place in Monterey.

65. Having an exchange gas station is convenient and is also a benefit (privilege) not a right, to members of the Armed Forces.

67. Gas station is a privilege vs. a right.

70. Gas station is not a right but rather a benefit which offsets the fact that service members cannot live in a locale of their choosing. This type of benefit (NEX in general) offsets the higher costs of goods and services at most naval base locations which are normally higher cost of living areas.

74. Keep it open!!

75. Only been in town for 6 weeks so I'm not settled yet on exchange gas.

76. Gas station is good. Prices are usually lower than most places and I like that I can use my credit card at no extra charge.

80. If parking is the reason the gas station would close, than fill in that stupid lake and turn it into a lot!

81. Rights are constitutional, privilege is more commensurate, plus, The gas station has been <u>very</u> convenient and cost effective, but hey, what's the gas station? Let's just do away (with) all benefits and the military too!

82. Keep the gas station open.

84. Although I don't use the station, many of my friends do, so it obviously has some utility.

87. Negative of gas station is poor hours.

89. Lower the prices!

92. Is this survey about the NEX gas station or parking? Get with the program, we don't need more parking - we need more people to use alternative transportation (ie. walk-less than 2 mile to La Mesa (housing), ride bicycle, carpool, take the bus)!

94. If we lose Fort Ord's station - this is the only gas we can get at a discount. If they close their station, you may see more people buying here at NPS.

97. We don't need more base parking, we need less cars on base!!! Should also have mid-grade unleaded.

98. Question # 8 - Its not a right, but I use the privilege. Bring back the shed so we can pay at the pumps! Its a waste of time to walk into the shop to pay (I know they're trying to get us to spend money inside, but now it takes twice as long to get gas.

99. # 8 is a Poorly worded question, a benefit is just that, a benefit not a right. Poorly done survey.

107. Get quality Gas! (Shell/Amoco/Texaco/BP)

108. "I don't want to park all the way over by the "gass" station. The decision to close the gass station should have no connection with parking problems. The gass station provides a service that has value in itself. You should examine the profitability and value of service provided at the station. This is a poorly written survey all questions should in clude "no response" that is not included as a sample statistic.
-Question 3. Does not include Diesel (a possible reason why respondents buy elsewhere)
-Question 5. Does not use consistent units of measure
-Question 6. is ambiguous; Does don't know mean "I don't know how I feel" or "I don't know about the quality of the gas"?
-Question 8 is irrelevant. NEX gas station is defined as a privilege not a right. Individual opinions about the

fact don't change it.
-Question 9 Does not have a full range of responses.
-Questions 10 & 11 are reciprical. If this is a test for respondent consistency they should be separated by other questions.

Overall, these weaknesses in this questionaire will introduce Bias into your Data that you will be unable to account for in your analysis. Result: Sloppy conclusion and a poor grade on your thesis."

109. The right and privilege to have a full service gas station should not be taken away for extra parking. If people would carpool, take the bus or walk we wouldn't have a question of more parking come up.

110. Parking is not a reason to give up the gas station. More people should ride the bus or carpool into school.

112. I always wonder why the NEX Gas Station verifies your I.D. card <u>after</u> pumping gas. What happens if you don't have an I.D. card? Do you have to give the gas back?

114. Would use the base gas station more to prevent closure! Also, sometimes octane 92 or higher is not available on base, so I choose to go off base to ensure obtaining higher octane.

115. Instead encourage carpooling and bus riding!! Make bus riding and carpooling mandatory for La Mesa residents.

117. With NEX Gas station prices only 1¢ different than at a civilian (station), it really doesn't matter.

121. Keep it open!!

122. The small number of additional parking places that would be provided would not justify closing the gas station. I don't think of it as a <u>right</u> but it is a great convenience.

123. There is plenty of parking on base. But to people who complain its not the lack of parking that's the problem, it's the lack of convenience parking that's the problem. I have never had trouble parking, but sometimes it wasn't very close.

126. Keep the service station open and close the exchange and the repair shop at the service station. The gas station provides a more important service than either of the two. Gas station is a privilege rather than a right.

127. Critical to have better prices than out in town.

128. Why don't you ask a question regarding what percentage of students think you ought to be able to get a graduate degree by doing "b---s--t" research such as this?

130. If prices were less than in town and if the station carried a mid-grade gas, we would have stronger feelings about keeping the station open.

131. There must be better ways to improve parking w/o taking down the gas station - once construction stops won't the problem be alleviated somewhat anyway?

132. Question #8 - It's a privilege!

136. More parking...what? There is no <u>effective</u> program to curtail the cars on campus. lets not be hasty. More people can walk or carpool. We all live too close to have these problems!!

140. Although the gas station is not a right it is convenient to use. It often takes the NEX station longer to reflect price decreases than stations in town.

143. The price charged for fuel is not all that great. They could lower the cost of gas!

144. Pave the whole base. Why are three of your choices for Question # 6 negative?

146. Question # 5- I fill up either at NPS or Fort Ord.
Question # 8- It's a privilege.

147. "Perhaps you could get a government grant next to study why plants grow up towards the sun and not down. What a waste of government and Navy time.
This is another attempt at the NEX to back out of a commitment to service to the customer. Parking is a "smoke screen." I have had never had trouble finding a parking place. Except I'm not afraid to walk across campus. Idiots that complain of parking are usually single passenger types who could either walk to school from La Mesa, catch the bus, or carpool."

154. Question #8- Although I don't see it as a right I believe it is an important compensation benefit.

157. Question #11- Depends on cost.

161. Certain questions need to be answered prior to completing this. Are we to assume the Presidio and Fort Ord stations will remain open? Are gas prices going to remain lower than town prices?

164. Question # 8- Its a privilege.
Question #10- Encourage La Mesa residents to use the bus. Build a multi-level parking garage, Don't eliminate services to solve the problem - I <u>like</u> the cheaper gas and convenience.

165. "What kind of major do I need to get to do a thesis on a gas station?"

167. Question # 8- Unsure.

169. Question # 8- It may not be a right, but it's one of the best benefits we get!

171. If more base parking is desired, encourage people to ride the bus by charging La Mesa residents who feel a <u>need</u> to drive less than one mile.

174. Question # 8 - Its not a right, but it is a <u>benefit</u>. It is very convenient and saves $ and time. Don't waste the money demolishing a service for a few parking spaces. There are plenty of spaces to park - people just don't want to walk far.

175. My family and I plan our gas purchase with shopping runs to the exchange and commissary (Ft. Ord). Saving 5-10¢ per gallon is more than enough incentive to come onto the base and shop. I very strongly endorse retaining the Navy Exchange Gas station. LCDR, 12 yrs service.

177. Concerning question 6 Quality of gasoline - What brand do we have this month? Can't answer when I don't know brand. + Not much thought was put into this thesis survey, are you really a grad student?

178. If the cost was constantly lower I would strongly approve of keeping it open. Good luck with your thesis!!

182. 1. If Fort Ord gas station closes with the draw down, then we ought to have that service at NPS.
2. A gas station is more important than parking. The parking problem would be solved if La Mesa residents would ride a bike or use the very excellent BUS SERVICE that's available.

183. Question # 8- A privilege not a right.
Closing the station for economic reasons is one thing; to simply make more parking spaces is UNSAT.

184. For Questions 5 & 6. I used to use the gas station all the time, but I developed a knocking in my engine. My dealer's service center recommended changing to a name brand gas because of quality control. When this solved the problem I became very wary about NEX gas.

189. Question # 8- Agree its a right - not so much for the gas but for the cheaper service.

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